



## Snow Survey and Water Supply Bulletin – January 1<sup>st</sup>, 2014

The January 1<sup>st</sup> snow survey is now complete. Data from 84 snow courses and 51 snow pillows around the province and climate data from Environment Canada have been used to form the basis for the following report<sup>1</sup>.

### Weather

Weather across British Columbia has been variable during the early portion of the snow accumulation season (October to December). For the southern sections of the province, precipitation conditions were drier than long-term average conditions in October and December and wetter than average conditions in November. The interior and northern sections of the province experienced progressively wetter conditions from October through to December with greater than average precipitation in the north.

Temperature trends from October to December were variable for most areas of the province. In November and December, persistent Arctic air masses caused temperatures to be below long-term average conditions for the northern areas of the province. In the south and on the coast, temperatures were close to average for October and December and above average for November.

### Snowpack

Snow pack conditions are variable across the province at this time. Snow basin indices range from a low of 7% of normal on Vancouver Island, to a high of 167% in the Liard (Table 1). The River Forecast Centre is currently estimating values for four snow pillows, and the January 1, 2014 estimates can be found in Table 2.

**Table 1 - BC Snow Basin Indices – January 1, 2014**

Basin	Percent of Normal	Basin	Percent of Normal
Upper Fraser	151	Okanagan-Kettle	115
Nechako	59	Similkameen	80
Middle Fraser	93	South Coast	37
Lower Fraser	57	Vancouver Island	7
North Thompson	98	Central Coast	78
South Thompson	95	Skagit	No Data
Upper Columbia	88	Peace	121
Lower Columbia	90	Skeena-Nass	94
East Kootenay	93	Stikine	117
West Kootenay	82	Northeast-Liard	167

Higher than average snow packs persist in the north and northeast (Upper Fraser, Peace, Stikine, and Liard) and lower than average conditions occur in the southwest of the province (Lower Fraser, South and Central Coast, and Vancouver Island). After low accumulation early in the season, several precipitation events through December resulted in most of the interior snow pack at average or close to average. The variable nature of snow distribution

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reflects the mixed trends in precipitation and temperature experienced in the province during the early accumulation period of winter 2013-2014.

**Table 2 - January 1 Automated Snow Pillow Estimates**

Snow Pillow ID	Snow Pillow Name	Observation Date	Estimated Snow Water Equivalent (mm)
1D18P	Disappointment Lake	01-Jan	295
1E08P	Azure River	01-Jan	585
1E10P	Kostal Lake	01-Jan	403
4A27P	Kwadacha River	01-Jan	203

### Outlook

Early winter 2013-2014 has been characterized by neutral ENSO conditions. The Climate Prediction Centre at the U.S. National Weather Service/NOAA has forecast continued neutral conditions through spring or summer 2014. In general, neutral ENSO conditions result in average weather conditions, though local weather conditions may vary from the long-term average through the province.

Seasonal forecasts from Environment Canada indicate most of the province may experience cooler than average conditions for the period January to March 2014. Eastern sections of the province may expect above average precipitation during this time, while the central and western sections of the province may experience average precipitation conditions.

By early January, generally about 50% of the annual BC snowpack has accumulated. Conditions in the Upper Fraser, Peace, Liard, and Stikine indicate the potential for increased flood risk. However, the January bulletin represents an early assessment of BC snow conditions and the outlook for spring freshet can change substantially over the next three or four months. Conditions in the northeast will be closely monitored to assess seasonal flood risk. Conditions in the southwest of the province may pose a risk for lower flows during freshet and into the summer. Conditions in the southern interior are close to average indicating the flood risk is typical for this time of year. At this point there are no strong indications of a high likelihood of extreme wet or dry seasonal weather through the rest of the accumulation season.

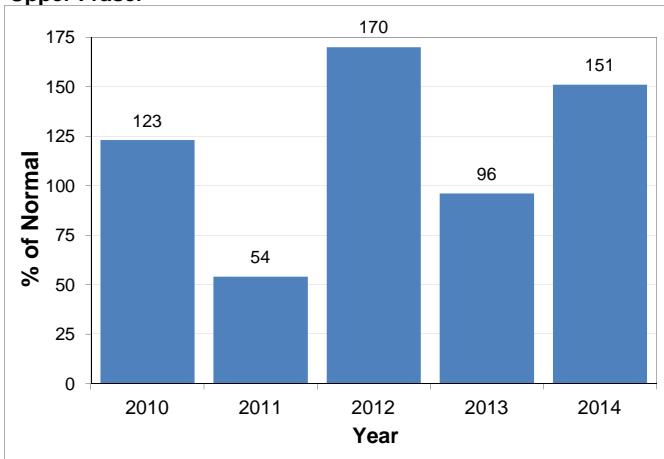
The River Forecast Centre will continue to monitor snow pack conditions and will provide an updated seasonal flood risk forecast in the February 2014 bulletin.

Produced by: BC River Forecast Centre  
January 8, 2014

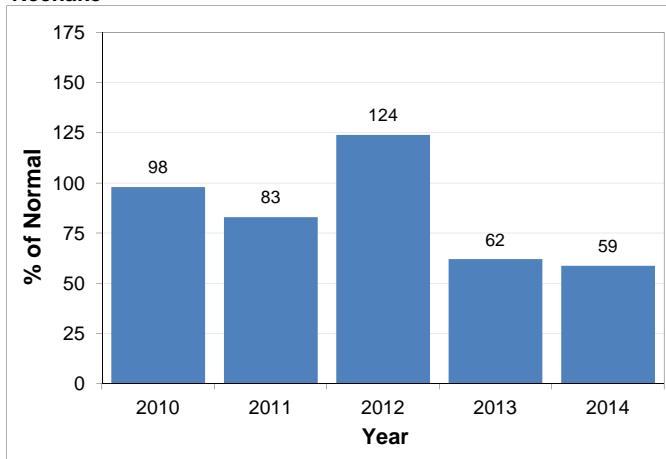
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## Snow Basin Index Graphs - January 1, 2014

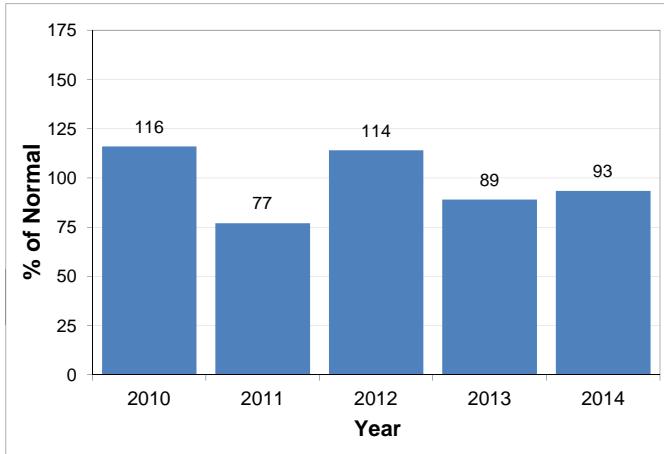
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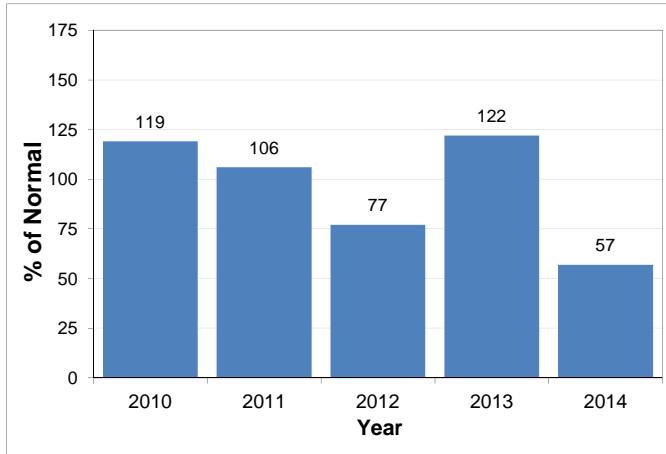
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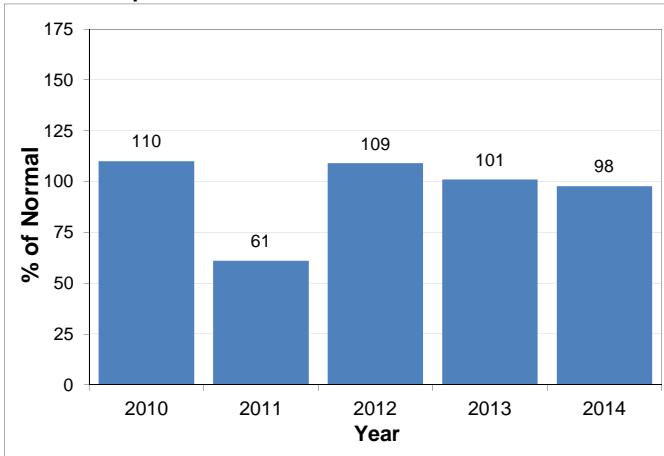
Middle Fraser



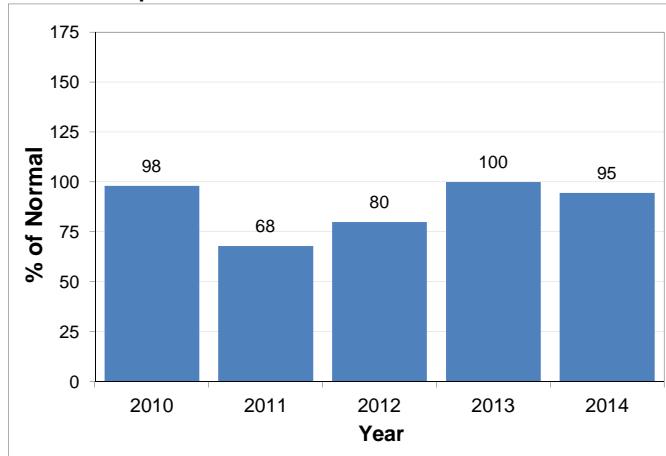
Lower Fraser



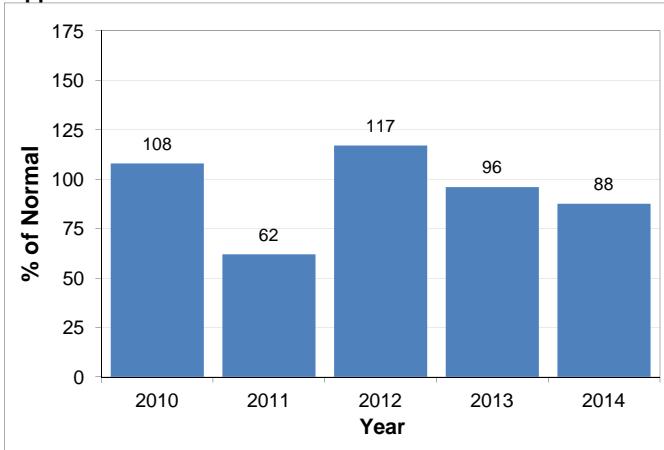
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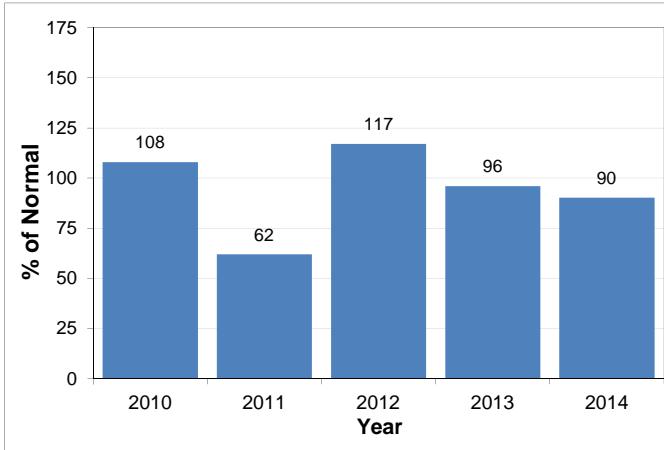
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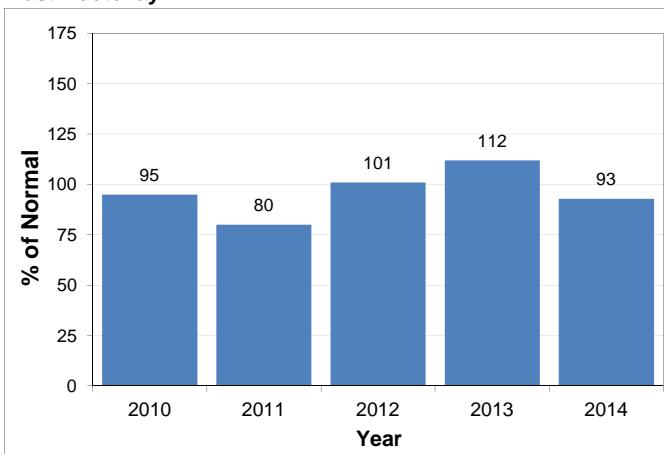
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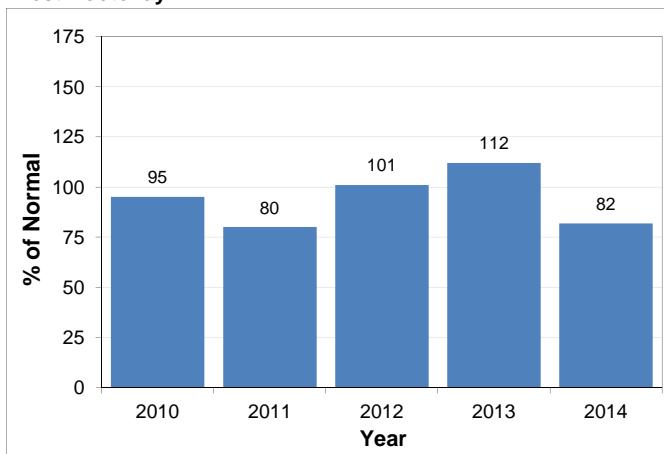
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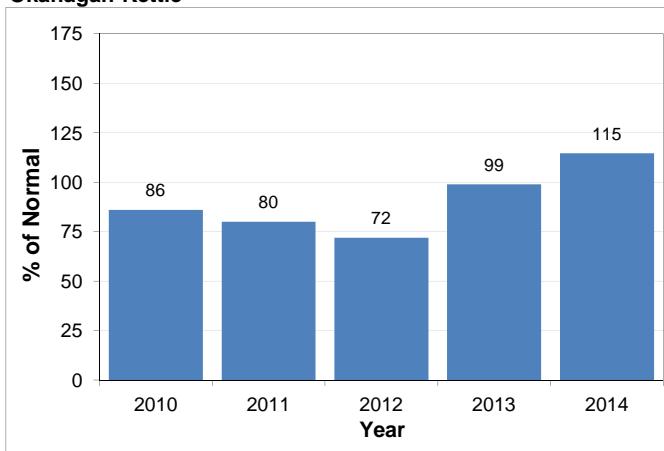
#### East Kootenay



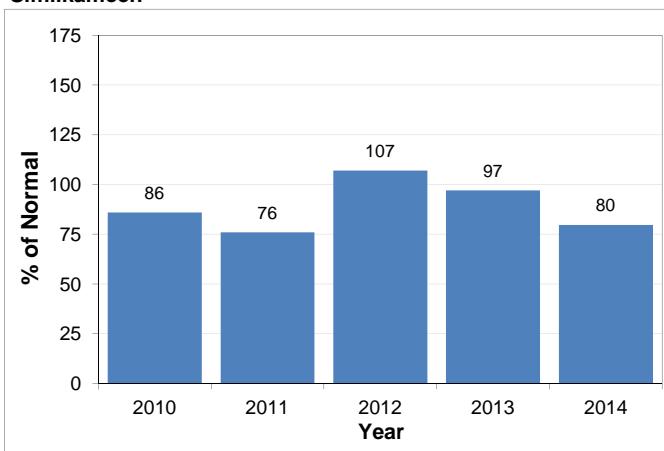
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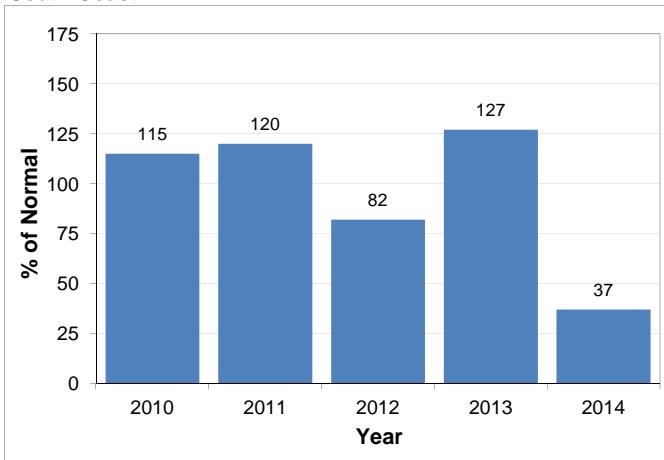
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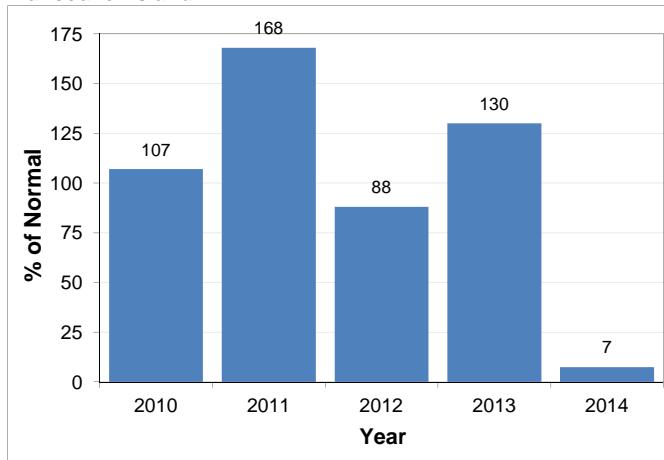
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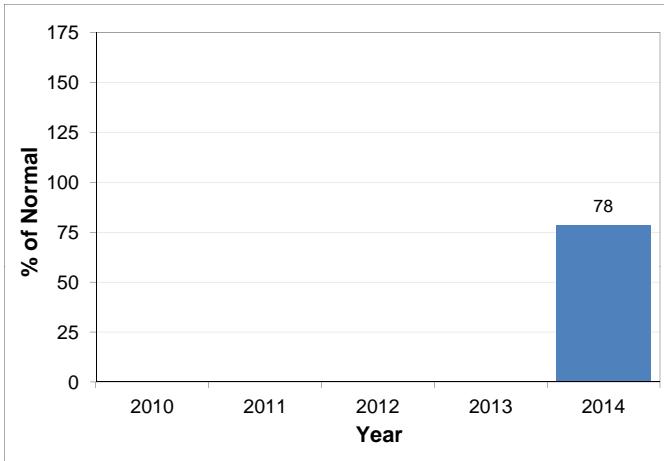
### South Coast



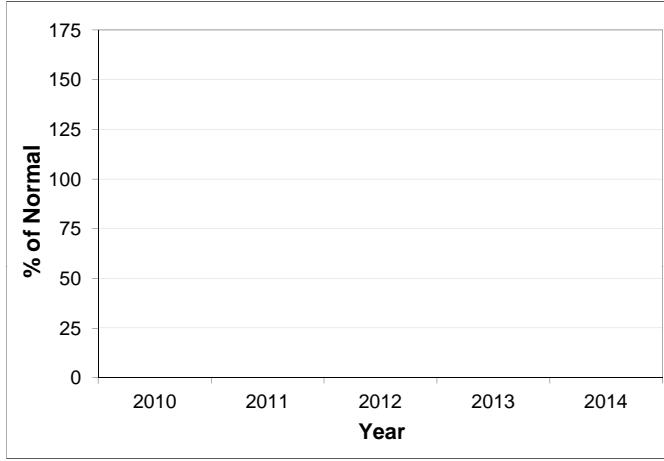
### Vancouver Island



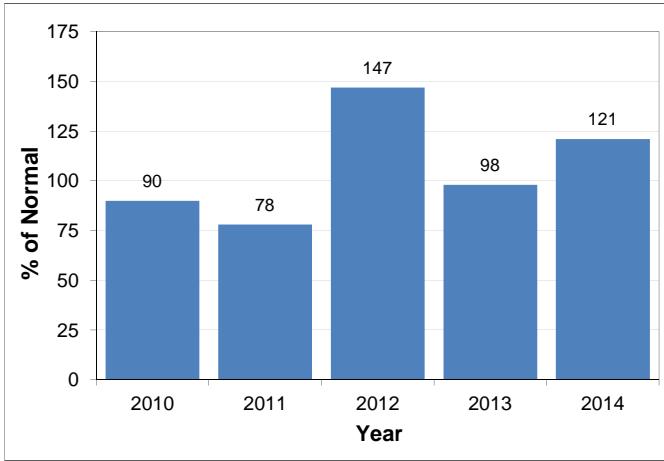
### Central Coast



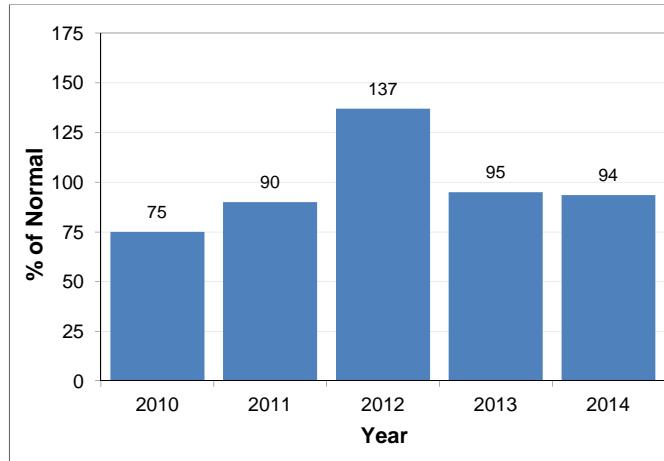
### Skagit



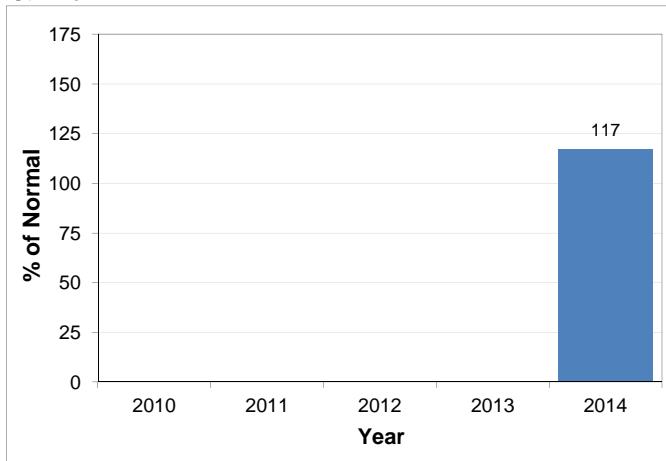
### Peace



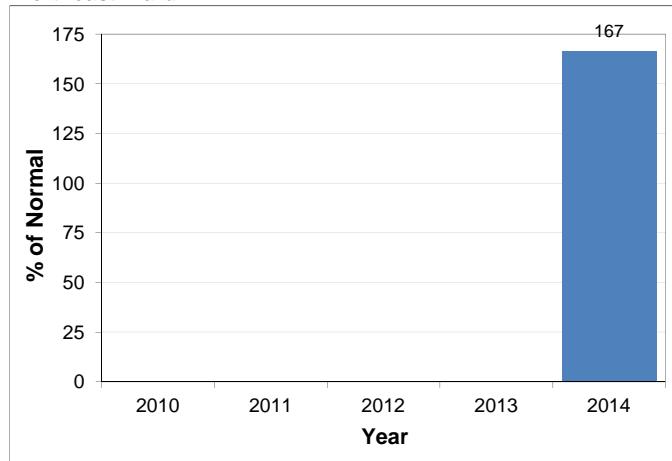
### Skeena-Nass



**Stikine**



**Northeast-Liard**





## Snow Survey and Water Supply Bulletin – February 1<sup>st</sup>, 2014

The February 1<sup>st</sup> snow survey is now complete. Data from 119 snow courses and 51 snow pillows around the province and climate data from Environment Canada form the basis for the following report<sup>1</sup>.

### Weather

January weather was dominated by persistent high pressure systems which led to dry conditions for most of the month. One period of unsettled weather occurred earlier in the month, and led to some additional snow accumulation across the province. January precipitation was well below average across the province. Particularly dry regions, with January precipitation amounts in the 30-60% of normal range, included the South Coast, Vancouver Island, North Coast, South Interior, and Central Interior. For most of the south half of the province, precipitation has been below normal since October.

Temperatures in January were above normal across the province. Temperatures on Vancouver Island and the South Coast were 0-2 °C above normal, 1-4 °C above normal in the North Coast, Okanagan, South Interior, Kootenay, Columbia and Thompson regions, and 3-8 °C above normal in the Chilcotin, Cariboo, Prince George, Skeena, Peace and Northern BC.

### Snowpack

Dry conditions through January led to a decline in snow basin indices in most regions of the province. Snow basin indices range from a low of 28% of normal on Vancouver Island, to a high of 174% in the Liard (Table 1). Most regions of the province have normal to slightly below normal snow pack (80-100%; See Figure 1). Note the River Forecast Centre is now using the 1981-2010 normal period for snow water equivalent normal values compared to the previously used 1971 - 2000. Normal values for this period for individual snow observation locations can be found in Appendix 2.

**Table 1 - BC Snow Basin Indices – February 1, 2014**

Basin	% of Normal	Basin	% of Normal
Upper Fraser	144	Okanagan-Kettle	88
Nechako	80	Similkameen	82
Middle Fraser	98	South Coast	43
Lower Fraser	49	Vancouver Island	28
North Thompson	90	Central Coast	91
South Thompson	96	Skagit	34
Upper Columbia	92	Peace	104
Lower Columbia	92	Skeena-Nass	89
East Kootenay	93	Stikine	93
West Kootenay	83	Northeast-Liard	174

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The north-east corner of the province have above average snow basin indices, with very heavy snow packs (>140%) in the Liard and Upper Fraser basins. Several individual surveys in the Liard and Upper Fraser have record, or near record values for the February 1<sup>st</sup> survey period. The snow basin index for the Upper Fraser is similar to the record conditions observed in 2012.

Very low snow packs (25-50% of normal) persist in the south-west part of the province, including Vancouver Island, South Coast, Lower Fraser and Skagit basins. The last time that similar low snow pack conditions were observed in these regions was in 2005, and in the past 40 years lower snow packs than present have been observed approximately once every 10-15 years.

### Streamflow

Runoff in many watersheds in the BC Interior has been near normal to above normal through the current water year (October 1<sup>st</sup>, 2013 to January 31<sup>st</sup>, 2014). This is likely the result of warmer temperatures and an increased portion of precipitation falling as rain rather than snow. Stream flow in Coastal watersheds has typically been below normal through this water year, as a result of dry seasonal conditions.

### Outlook

By early February, generally about two-thirds of the annual BC snowpack has accumulated. Conditions in the Upper Fraser and Liard (>130% of normal) indicate the potential for increased seasonal flood risk.

In the south-west (Vancouver Island, South Coast, Lower Fraser, Skagit) the low snow packs indicate that we can expect below normal seasonal runoff during the spring melt. Given the time of year, it will require significant wet weather over the next 2-3 months to recover the snow pack to normal levels. While lower spring runoff can be expected, spring and summer weather conditions will be the key factor in determining whether or not drought and low flows will occur this summer. These regions will continue to be monitored closely for potential impacts of the low snow pack on stream flows.

Seasonal volume runoff forecasts (in Appendix below) have higher than normal runoff forecasted in the Upper Fraser and Middle Fraser basins, near normal runoff forecasted in the Thompson, Okanagan, Similkameen and Skeena basins, and below normal runoff forecasted in the Nicola basin.

The winter 2013-2014 has been characterized by neutral ENSO conditions. The Climate Prediction Centre at the U.S. National Weather Service/NOAA has forecast continued neutral conditions through spring and summer 2014. In general, neutral ENSO conditions do not

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indicate an increased likelihood of either wet or dry seasonal weather, however local weather conditions may vary from the long-term average through the province.

Seasonal forecasts from Environment Canada indicate most of the province, except for south-west regions, has an increased likelihood of cooler than average conditions for the period February to April 2014. Forecasts for seasonal precipitation do not indicate an increased likelihood for any particular trend.

The River Forecast Centre will continue to monitor snow pack conditions and will provide an updated seasonal water supply and flood risk assessment in the March 2014 Snow Bulletin, scheduled for release on March 10, 2014.

Produced by: BC River Forecast Centre  
February 7, 2014

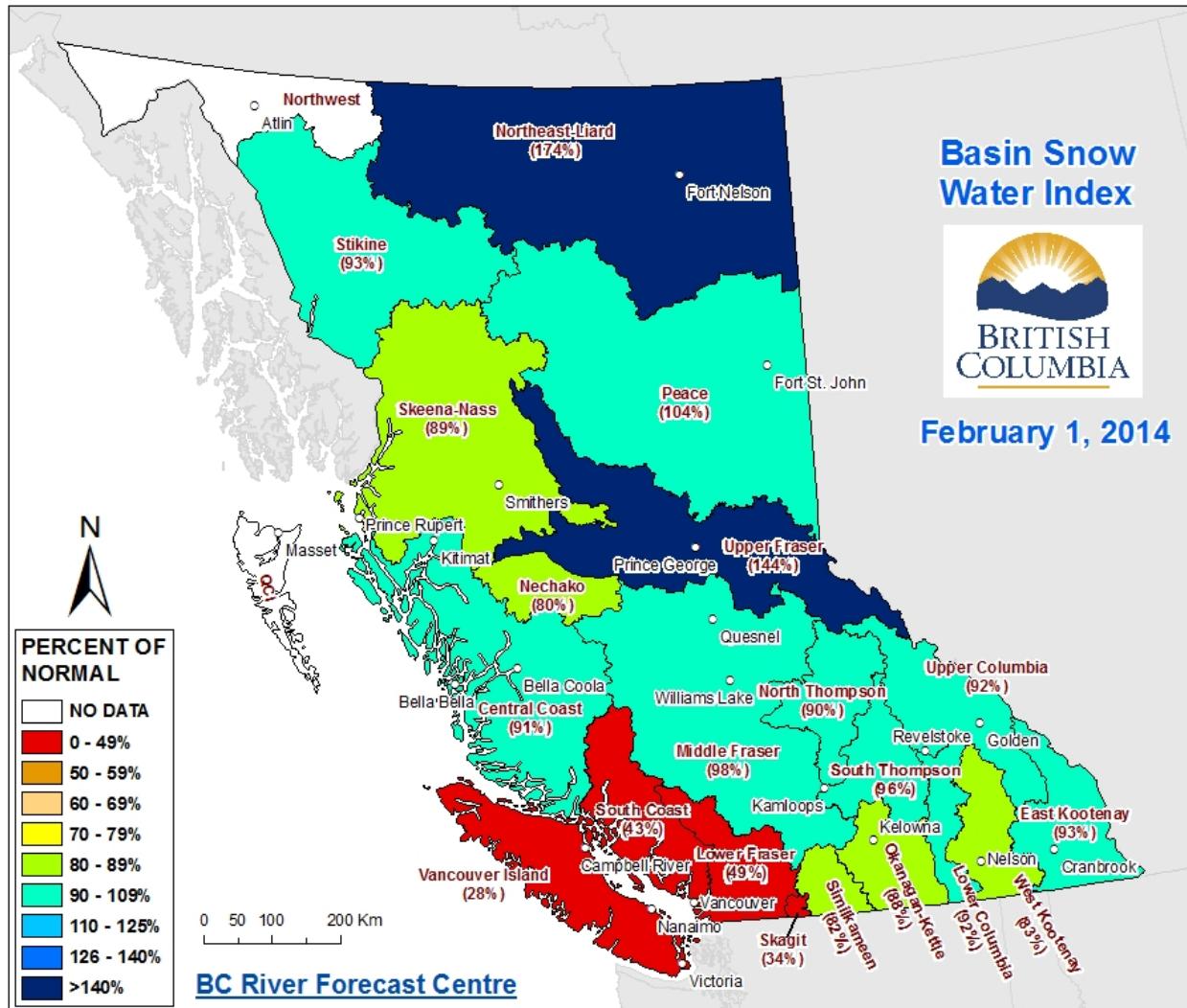


Ministry of  
Forests, Lands and  
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RIVER FORECAST CENTRE

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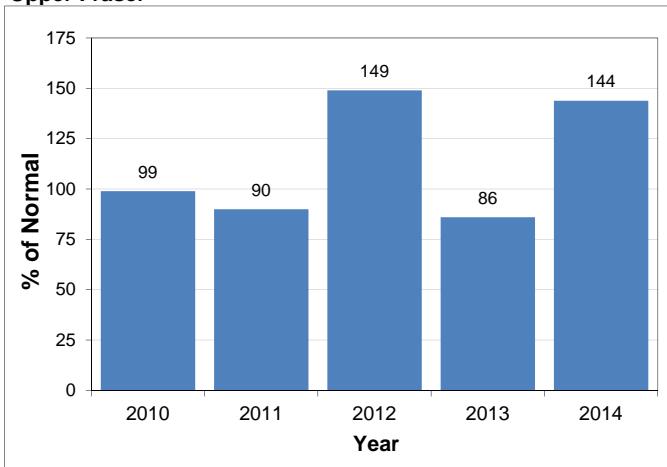
Figure 1: Basin Snow Water Index – February 1<sup>st</sup>, 2014



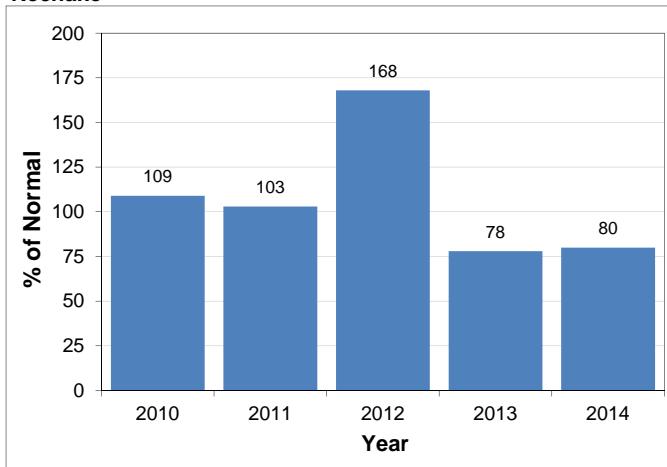
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## Snow Basin Index Graphs - February 1, 2014

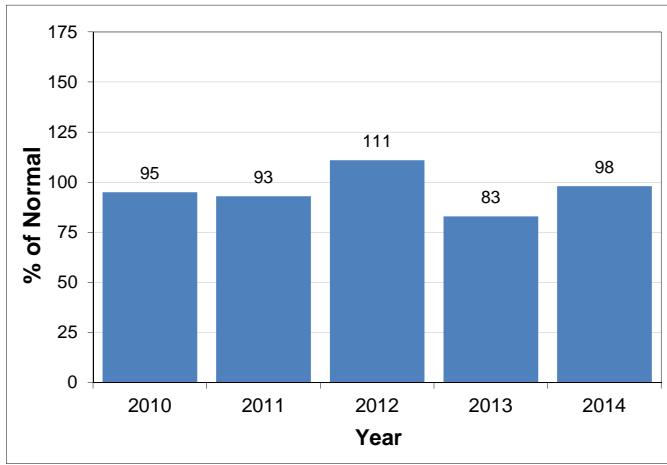
**Upper Fraser**



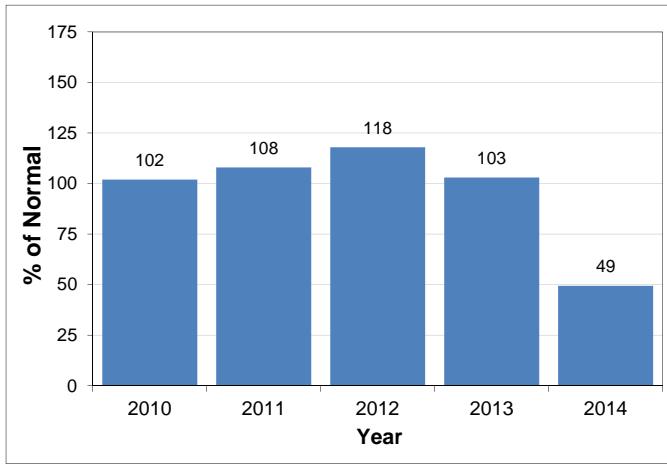
**Nechako**



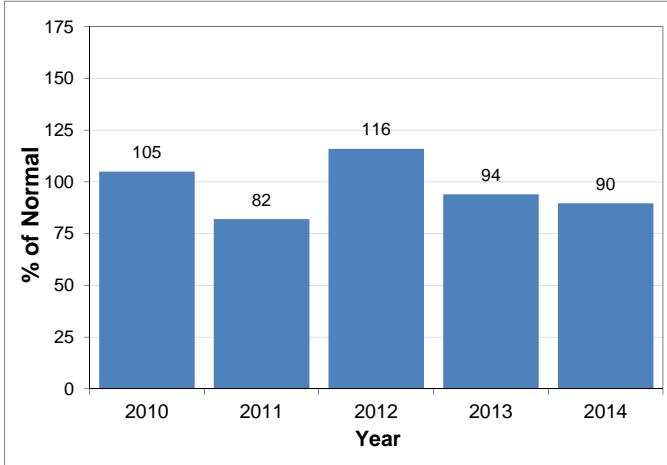
**Middle Fraser**



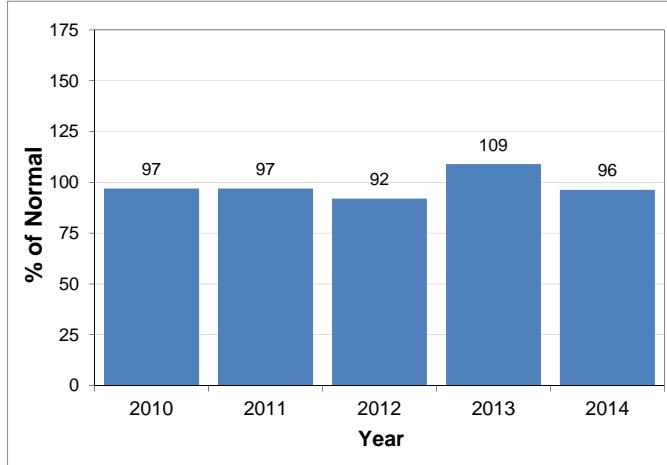
**Lower Fraser**

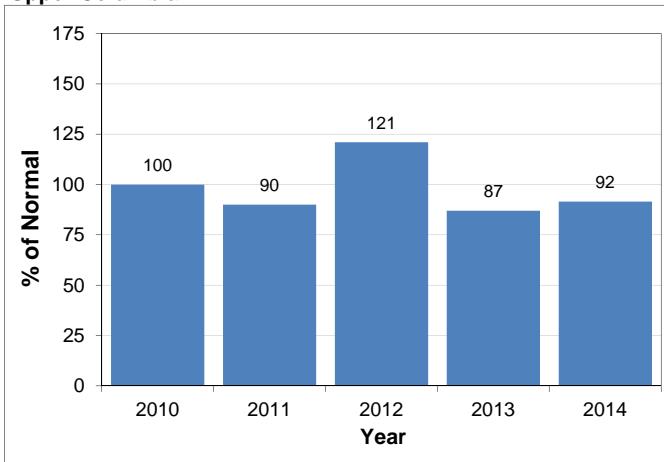
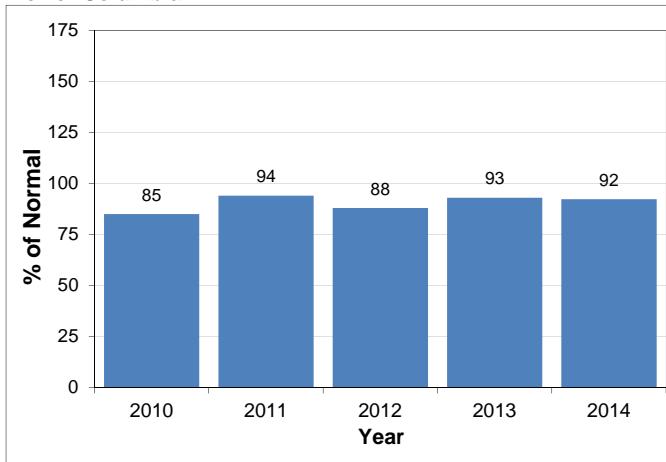
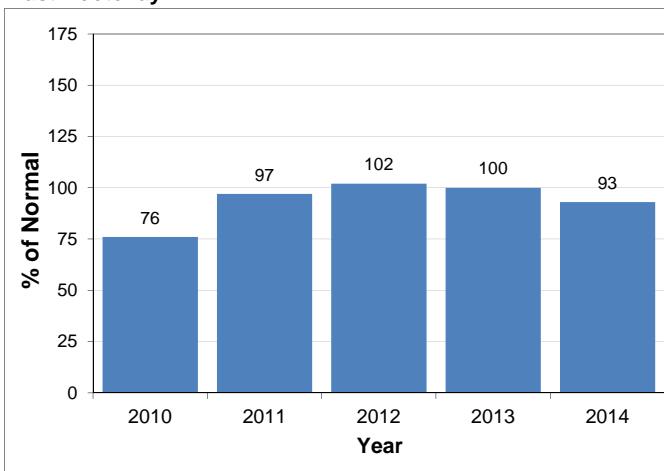
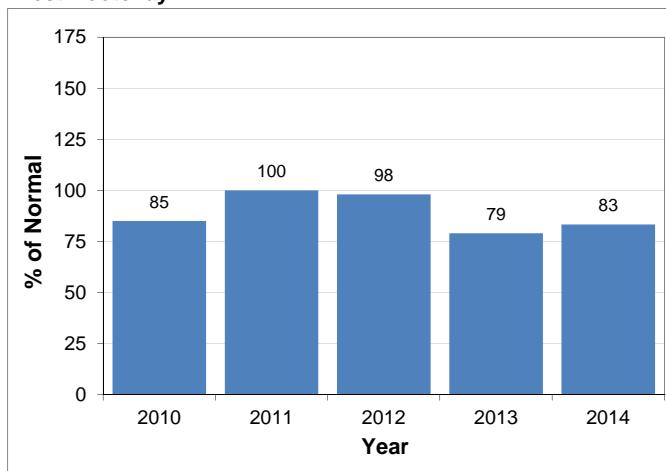
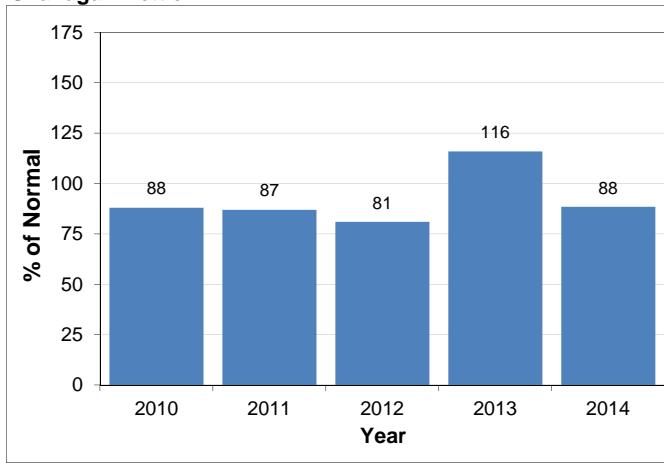
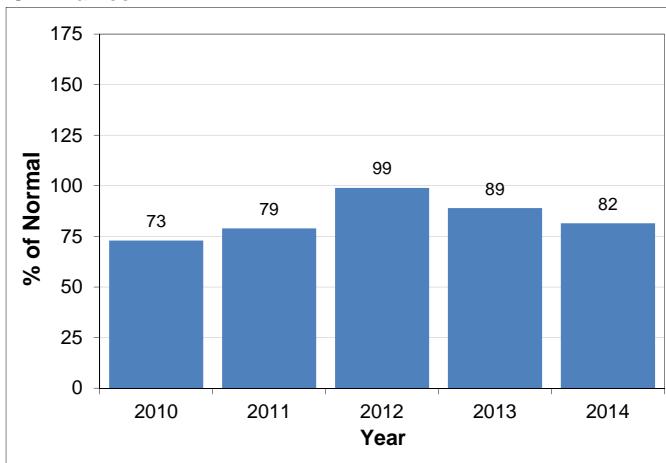


**North Thompson**

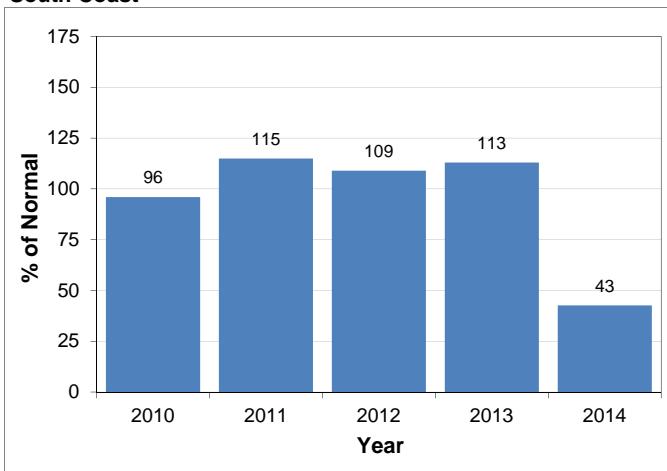


**South Thompson**

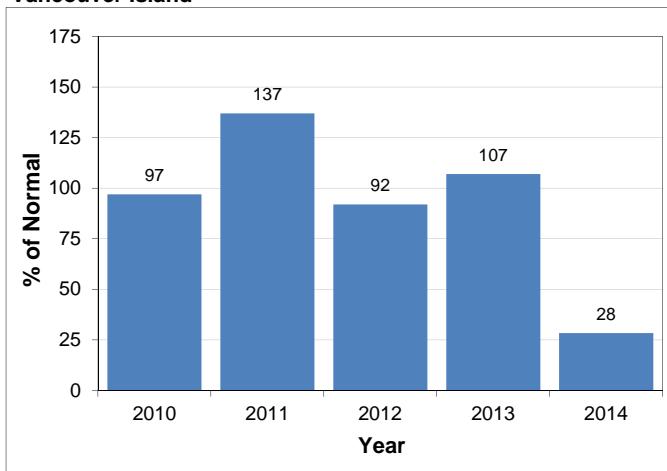


**Upper Columbia****Lower Columbia****East Kootenay****West Kootenay****Okanagan-Kettle****Similkameen**

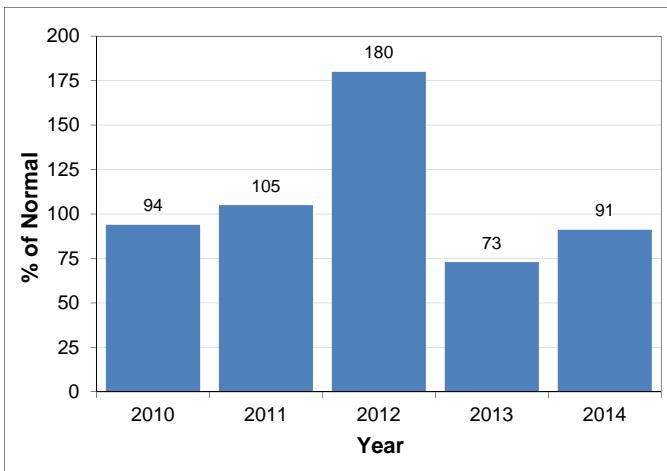
### South Coast



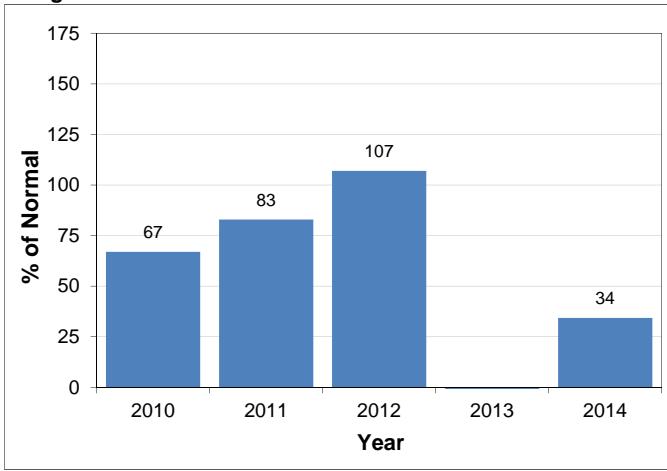
### Vancouver Island



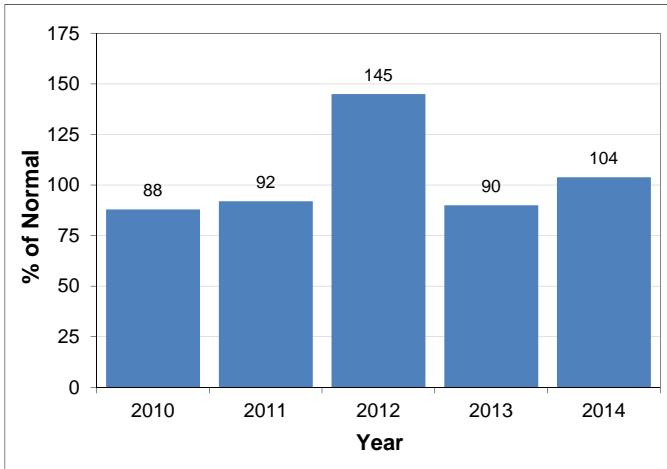
### Central Coast



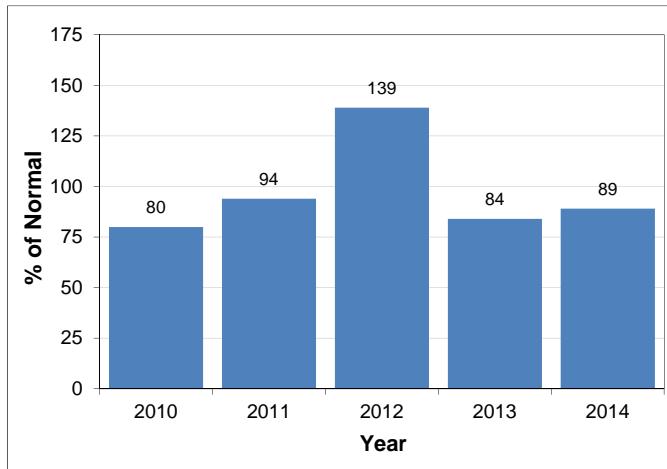
### Skagit



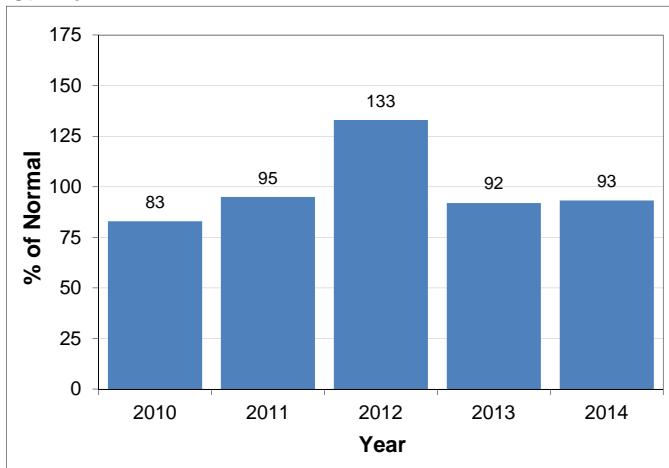
### Peace



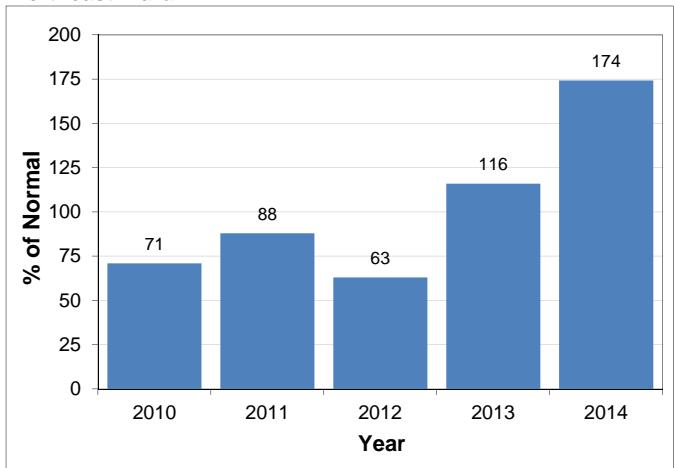
### Skeena-Nass



**Stikine**



**Northeast-Liard**



**Ministry of Forests, Lands and Natural Resource Operations**  
**River Forecast Centre**  
**Volume Runoff Forecast February 2014**

<b>Location</b>	<b>Feb - Jun Runoff</b>				<b>Feb - Jul Runoff</b>				<b>Feb - Sep Runoff</b>				
	<b>Forecast (kdam<sup>3</sup>)</b>	<b>Normal (1981-2010) (kdam<sup>3</sup>)</b>	<b>% of Normal</b>	<b>Std. Error (kdam<sup>3</sup>)</b>	<b>Forecast (kdam<sup>3</sup>)</b>	<b>Normal (1981-2010) (kdam<sup>3</sup>)</b>	<b>% of Normal</b>	<b>Std. Error (kdam<sup>3</sup>)</b>	<b>Forecast (kdam<sup>3</sup>)</b>	<b>Normal (1981-2010) (kdam<sup>3</sup>)</b>	<b>% of Normal</b>	<b>Std. Error (kdam<sup>3</sup>)</b>	
Upper Fraser Basin	Fraser at McBride					4260	3858	110	333	5895	5325	111	396
	McGregor at Lower Canyon					5216	4185	125	553	6405	5231	122	672
	Fraser at Shelley					20230	16786	121	1716	24746	20845	119	2033
Middle Fraser Basin	Quesnel River at Quesnel					5841	4930	118	551	7520	6261	120	661
Thompson Basin	N. Thompson at McLure					9014	9411	96	710	10745	11580	93	925
	Thompson at Spences Bridge					14858	16353	91	1381	18321	20333	90	1775
Bulkley and Skeena	Bulkley at Quick					2260	2784	81	1655	2799	3381	83	2173
	Skeena at Usk					18514	19604	94	1553	22366	23948	93	2123
Nicola Lake	Inflows	67.6	131	52	33.2	126	148	85	38.2				
Nicola River	at Spences Bridge	369	549	67	100	401	616	65	123				
Okanagan and Kalamalka-Wood Lake	Okanagan Lake with Greyback (2F08)	533	488	109	99	565	515	110	120				
	Kalamalka-Wood Lake	23.6	33.1	71	12.8	23.7	34.5	69	15.1				
Similkameen River	at Nighthawk	1302	1391	94	166					1568	1701	92	196
	at Hedley	1018	1080	94	139					1179	1268	93	148

Note: 1 kdam<sup>3</sup>=1,000,000 m<sup>3</sup>

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

Appendix 2

2014 Automated Snow Pillow/Manual Snow Survey Data				February					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	2013 SWE (mm)	2012 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record
1A01P	YELLOWHEAD LAKE	Upper Fraser	1847	2014-02-01	101	359		91%	267	543	233	596	396	16
1A02P	MC BRIDE (UPPER)	Upper Fraser	1608	2014-02-01	125	394		129%	229	523	195	522	306	21
1A03P	BARKERVILLE	Upper Fraser	1483	2014-02-01	102	285		133%	210	303	116	368	214	38
1A05	LONGWORTH (UPPER)	Upper Fraser	1693	2014-01-31	267	1042		186%	592	782	236	890	559	40
1A06A	HANSARD	Upper Fraser	622	NS					NS	NS	112	326	180	19
1A10	PRINCE GEORGE A	Upper Fraser	684	2014-01-29	61	147		153%	124	96	0	224	96	52
1A11	PACIFIC LAKE	Upper Fraser	756	2014-01-31	190	679		158%	453	649	179	679	430	46
1A12	KAZA LAKE	Upper Fraser	1247	2014-01-30	91	266		111%	220	299	125	440	240	41
1A14P	HEDRICK LAKE	Upper Fraser	1118	2014-02-01	221	911		174%	649	934	356	934	524	13
1A15	KNUDSEN LAKE	Upper Fraser	1598	2014-01-31	213	818		148%	455	840	284	899	554	43
1A16	BURNS LAKE	Upper Fraser	820	2014-01-29	42	86		77%	94	120	44	232	111	43
1A17P	REVOLUTION CREEK	Upper Fraser	1676	2014-02-01	225	871		152%	557	1042	295	1042	574	28
1A19P	DOME MOUNTAIN	Upper Fraser	1768	2014-02-01	196	699		140%	449	853	364	853	501	7
1A23	BIRD CREEK	Upper Fraser	1196	2014-01-31	50	104		101%	112	104	56	196	103	22
1B01	MOUNT WELLS	Nechako	1489	2014-02-01	105	344		94%	272	514	188	606	365	28
1B01P	MOUNT WELLS	Nechako	1489	2014-02-01	N/A	386		94%	259	629	210	656	411	21
1B02	TAHTSA LAKE	Nechako	1319	2014-02-01	157	585		69%	694	1442	508	1442	853	57
1B02P	TAHTSA LAKE	Nechako	1319	2014-02-01	N/A	630		68%	564	1484	564	1532	929	21
1B05	SKINS LAKE	Nechako	877	2014-02-01	24	55		66%	88	60	35	224	83	45
1B06	MOUNT SWANNELL	Nechako	1596	2014-01-31	72	210		100%	168	199	88	334	211	24
1B07	NUTLI LAKE	Nechako	1502	2014-02-01	85	262		69%	218	729	218	729	378	22
1B08P	MOUNT PONDOSY	Nechako	1413	2014-02-01	N/A	273		47%	343	873	326	877	578	21
1C01	BROOKMERE	Middle Fraser	994	NS					NS	NS	41	297	142	45
1C05	MCGILLIVRAY PASS	Middle Fraser	1715	2014-01-27	76	205		52%	296	517	150	645	397	60
1C06	PAVILION	Middle Fraser	1209	NS					NS	NS	0	130	49	29
1C08	NAZKO	Middle Fraser	1029	NS					54	47	6	132	57	34
1C09A	HIGHLAND VALLEY	Middle Fraser	1547	NS					NS	NS	20	188	67	24
1C12P	GREEN MOUNTAIN	Middle Fraser	1766	2014-02-01	N/A	278		45%	439	754	393	985	620	19
1C13A	HORSEFLY MOUNTAIN	Middle Fraser	1612	NS					NS	NS	204	475	310	9
1C14	BRALORNE	Middle Fraser	1382	2014-01-27	35	84		67%	NS	102	0	338	125	40
1C17	MOUNT TIMOTHY	Middle Fraser	1632	2014-01-26	102	315		143%	221	222	92	384	221	46
1C18P	MISSION RIDGE	Middle Fraser	1903	2014-02-01	N/A	290		73%	322	492	185	794	398	43
1C19	GNAWED MOUNTAIN	Middle Fraser	1617	NS					NS	NS	18	198	76	22
1C20P	BOSS MOUNTAIN MINE	Middle Fraser	1477	2014-02-01	129	383		93%	351	396	281	611	411	19
1C21	BIG CREEK	Middle Fraser	1130	2014-01-26	29	72		147%	36	14	0	94	49	38
1C22	PUNTZI MOUNTAIN	Middle Fraser	939	2014-01-31	27	64		123%	44	16	0	126	52	41
1C23	PENFOLD CREEK	Middle Fraser	1687	NS					NS	NS	663	663	663	2
1C25	LAC LE JEUNE (UPPER)	Middle Fraser	1471	2014-01-29	32	73		74%	143	92	13	177	98	41
1C28	DUFFEY LAKE	Middle Fraser	1253	NS					NS	NS			0	
1C29	SHOVELNOSE MOUNTAIN	Middle Fraser	1456	2014-01-31	50	121		72%	200	253	48	307	169	31
1C32	DEADMAN RIVER	Middle Fraser	1463	NS					NS	NS	50	130	81	6
1C33A	GRANITE MOUNTAIN	Middle Fraser	1175	2014-02-04	62	173		124%	145	136	97	175	139	8
1C37	BRALORNE(UPPER)	Middle Fraser	1980	2014-01-27	80	250		58%	NS	594	178	724	434	18
1C38	DOWNTON LAKE (UPPER)	Middle Fraser	1884	2014-01-27	83	208		32%	NS	710	250	980	646	17
1C39	BRIDGE GLACIER (LOWER)	Middle Fraser	1393	2014-01-27	61	164		37%	306	408	112	688	444	17
1C40	TYAUGHTON CREEK (NORTH)	Middle Fraser	1946	2014-01-27	79	224		68%	NS	378	128	654	331	15

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2014 Automated Snow Pillow/Manual Snow Survey Data				February				Historic Snow Water Equivalent (mm)						
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1C41P	YANKS PEAK, EAST	Middle Fraser	1683	2014-02-01	208	787		139%	540	681	312	803	565	16
1C42	CAVERHILL LAKE NEW	Middle Fraser	N/A	NS										
1D06P	TENQUILLE LAKE	Lower Fraser	1669	2014-02-01	113	344		49%	577	901	450	1092	708	12
1D08	STAVE LAKE	Lower Fraser	1211	2014-01-26	115	418		47%	NS	1086	163	2010	881	38
1D09	WAHLEACH LAKE	Lower Fraser	1395	2014-01-26	62	243		67%	559	477	33	665	364	39
1D09P	WAHLEACH LAKE	Lower Fraser	1408	2014-02-01	N/A	325		50%	661	615	314	1061	644	21
1D10	NAHATLATCH RIVER	Lower Fraser	1530	NS					NS	1170	262	1359	833	36
1D16	DICKSON LAKE	Lower Fraser	1147	2014-01-26	112	472		51%	1530	1144	206	1538	918	
1D17P	CHILLIWACK RIVER	Lower Fraser	1621	2014-02-01	250	1001		101%	1125	1436	368	1659	992	21
1D18P	DISAPPOINTMENT LAKE	Lower Fraser	932	2014-02-01	N/A	488	E	45%	1092	1099	194	1673	1083	13
1D19P	SPUZZUM CREEK	Lower Fraser	1197	2014-02-01	135	544		51%	1176	1374	300	1902	1074	14
1E01B	BLUE RIVER	North Thompson	673	2014-02-02	112	332		136%	185	238	98	380	245	29
1E02P	MOUNT COOK	North Thompson	1574	2014-02-01	N/A	784		88%	835	1095	713	1098	890	13
1E03A	TROPHY MOUNTAIN	North Thompson	1907	NS					NS	NS				0
1E05	KNOUFF LAKE	North Thompson	1189	2014-02-01	43	123		113%	132	100	38	229	109	51
1E07	ADAMS RIVER	North Thompson	1769	2014-02-01	129	468		102%	471	514	285	654	457	32
1E08P	AZURE RIVER	North Thompson	1625	2014-02-01	166	607		75%	821	1033	506	1043	814	16
1E10P	KOSTAL LAKE	North Thompson	1760	2014-02-01	176	572		94%	539	700	417	790	611	28
1F01A	ABERDEEN LAKE	South Thompson	1262	2014-02-03	56	123		115%	116	89	48	193	107	56
1F02	ANGLEMONT	South Thompson	1168	2014-01-26	102	346		127%	244	224	130	483	272	53
1F03P	PARK MOUNTAIN	South Thompson	1857	2014-02-01	198	607		102%	608	473	331	867	593	28
1F04	ENDERBY	South Thompson	1948	2014-01-31	197	707		103%	817	NS	348	932	688	47
1F06P	CELISTA MOUNTAIN	South Thompson	1533	2014-02-01	164	533		83%	599	644	533	788	643	8
2A01A	CANOE RIVER	Upper Columbia	866	2014-01-30	50	120		162%	47	124	17	140	74	37
2A02	GLACIER	Upper Columbia	1249	2014-01-27	137	480		103%	428	643	241	828	468	73
2A03A	FIELD	Upper Columbia	1310	2014-01-31	62	130		106%	76	121	46	233	123	74
2A06P	MOUNT REVELSTOKE	Upper Columbia	1770	2014-02-01	N/A	677		83%	769	928	464	1190	819	20
2A07	KICKING HORSE	Upper Columbia	1648	2014-02-03	87	222		98%	178	225	102	384	227	67
2A11	BEAVERFOOT	Upper Columbia	1924	2014-01-27	59	148		104%	170	NS	78	244	142	42
2A14	MOUNT ABBOT	Upper Columbia	2031	2014-01-27	195	685		83%	785	1142	396	1209	822	53
2A16	GOLDSTREAM	Upper Columbia	1914	2014-01-26	206	709		87%	721	NS	460	1136	816	42
2A17	FIDELITY MOUNTAIN	Upper Columbia	1852	2014-01-27	222	736		86%	687	1104	430	1376	854	51
2A18	KEYSTONE CREEK	Upper Columbia	1839	2014-01-26	124	396		72%	520	746	290	866	548	41
2A19	VERMONT CREEK	Upper Columbia	1533	2014-01-27	83	229		80%	NS	377	102	574	287	42
2A21P	MOLSON CREEK	Upper Columbia	1930	2014-02-01	N/A	645		85%	687	1050	417	1155	759	32
2A22	SUNBEAM LAKE	Upper Columbia	2066	2014-01-26	166	551		88%	NS	818	348	886	629	41
2A23	BUSH RIVER	Upper Columbia	1982	2014-01-26	137	418		72%	NS	NS	292	902	577	42
2A25	KIRBYVILLE LAKE	Upper Columbia	1739	2014-01-26	185	639		77%	832	NS	381	1472	827	36
2A27	DOWNNIE SLIDE (LOWER)	Upper Columbia	964	2014-01-26	157	480		96%	448	NS	256	740	501	30
2A29	DOWNNIE SLIDE (UPPER)	Upper Columbia	1628	2014-01-26	203	726		75%	910	1236	466	1422	965	30
2B02A	FARRON	Lower Columbia	1229	2014-02-04	72	182		83%	190	151	63	346	219	40
2B05	WHATSHAN (UPPER)	Lower Columbia	1476	2014-01-28	138	445		94%	418	NS	249	759	475	35
2B06	BARNES CREEK	Lower Columbia	1598	2014-01-27	119	373		104%	339	340	169	612	360	45
2B06P	BARNES CREEK	Lower Columbia	1595	2014-02-01	N/A	366		99%	355	326	195	566	369	20
2B07	KOCH CREEK	Lower Columbia	1813	NS					NS	NS	203	708	497	34
2B08	ST. LEON CREEK	Lower Columbia	1828	2014-01-27	219	755		89%	809	NS	474	1247	848	40
2B08P	ST. LEON CREEK	Lower Columbia	1822	2014-02-01	N/A	653		85%	694	731	311	1130	767	20
2B09	RECORD MOUNTAIN	Lower Columbia	1906	NS					640	NS	117	802	481	35

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2C01	SINCLAIR PASS	East Kootenay	1374	NS				NS	NS	33	208	77	44		
2C04	SULLIVAN MINE	East Kootenay	1580	2014-01-30	90	188		101%	238	198	46	397	187	68	
2C07	FERNIE EAST	East Kootenay	1213	2014-02-02	70	184		87%	199	207	51	467	212	58	
2C09Q	MORRISSEY RIDGE	East Kootenay	1966	NS	N/A	399		86%	428	458	173	886	463	33	
2C10P	MOYIE MOUNTAIN	East Kootenay	1840	2014-02-01	84	286		100%	255	361	104	518	286	34	
2C11	KIMBERLEY (UPPER) VOR	East Kootenay	2148	NS				NS	NS	114	571	290	23		
2C12	KIMBERLEY (MIDDLE) VOR	East Kootenay	1692	NS				NS	NS	81	356	174	23		
2C14	FLOE LAKE	East Kootenay	2087	2014-01-27	137	418		81%	606	NS	239	811	517	40	
2C14P	FLOE LAKE	East Kootenay	2110	2014-02-01	N/A	408		87%	533	580	221	746	471	20	
2C15	MOUNT ASSINIBOINE	East Kootenay	2230	NS				NS	NS	140	592	351	38		
2C16	MOUNT JOFFRE	East Kootenay	1763	2014-01-27	81	223		93%	289	234	96	439	240	39	
2C17	THUNDER CREEK	East Kootenay	2062	2014-01-27	73	193		110%	NS	NS	69	335	175	37	
2C20	VERMILLION RIVER NO. 3	East Kootenay	1612	NS				NS	NS	130	363	188	15		
2D02	FERGUSON	West Kootenay	929	2014-01-31	121	360		88%	340	NS	237	616	407	36	
2D03	SANDON	West Kootenay	1072	NS				NS	NS	328	328	N/A	1		
2D04	NELSON	West Kootenay	952	2014-01-30	64	160		61%	180	237	79	508	264	75	
2D05	GRAY CREEK (LOWER)	West Kootenay	1558	2014-01-31	113	345		113%	NS	285	127	511	304	61	
2D06	CHAR CREEK	West Kootenay	1290	2014-02-01	99	256		69%	368	364	117	650	371	47	
2D07A	DUNCAN LAKE NO. 2	West Kootenay	662	2014-01-30	46	104		79%	62	99	60	283	132	23	
2D08P	EAST CREEK	West Kootenay	2004	2014-02-01	N/A	471		76%	665	675	274	1012	616	32	
2D09	MOUNT TEMPLEMAN	West Kootenay	1879	2014-01-27	164	528		75%	NS	762	409	1115	701	38	
2D10	GRAY CREEK (UPPER)	West Kootenay	1926	2014-01-31	160	500		101%	NS	568	268	792	497	40	
2D14P	REDFISH CREEK	West Kootenay	2086	2014-02-01	197	713		87%	882	1067	667	1067	821	11	
2E01	MONASHEE PASS	Kettle	1387	2014-01-28	92	292		124%	208	NS	122	364	236	52	
2E02	CARMI	Kettle	1254	NS				NS	NS	51	196	97	26		
2E03	BIG WHITE MOUNTAIN	Kettle	1672	2014-01-28	102	301		93%	334	NS	178	483	322	46	
2E06	BLUEJOINT MOUNTAIN	Kettle	1990	NS				NS	NS			0	0		
2E07P	GRANO CREEK	Kettle	1874	2014-02-01	108	156		47%	337	245	180	476	330	15	
2F01	TROUT CREEK	Okanagan	1428	2014-01-26	54	152		120%	201	206	33	292	127	73	
2F01A	TROUT CREEK (WEST)	Okanagan	1430	2014-01-26	47	141		96%	212	209	147	212	147	4	
2F02	SUMMERLAND RESERVOIR	Okanagan	1304	2014-01-29	62	120		77%	159	148	65	307	156	49	
2F03	MC CULLOCH	Okanagan	1266	2014-01-31	70	166		142%	153	116	63	196	117	74	
2F04	GRAYSTOKE LAKE	Okanagan	1818	2014-02-04	96	308		141%	266	188	128	324	219	13	
2F05P	MISSION CREEK	Okanagan	1794	2014-02-01	122	403		126%	372	272	164	503	320	43	
2F07	POSTILL LAKE	Okanagan	1358	NS				134	144	73	243	138	63		
2F08	GRAYBACK RESERVOIR	Okanagan	1548	2014-01-26	67	195		124%	191	156	60	269	157	39	
2F09	WHITEROCKS MOUNTAIN	Okanagan	1789	2014-01-28	82	248		68%	429	296	135	693	366	41	
2F10	SILVER STAR MOUNTAIN	Okanagan	1834	2014-02-02	137	483		97%	626	396	229	721	498	55	
2F11	ISINTOK LAKE	Okanagan	1651	2014-01-29	48	80		73%	106	109	26	307	109	47	
2F12	MOUNT KOBAU	Okanagan	1817	2014-01-30	52	84		43%	400	131	43	400	196	47	
2F13	ESPERON CR (UPPER)	Okanagan	1634	NS				NS	NS	156	457	156	4		
2F14	ESPERON CR (MIDDLE)	Okanagan	1440	NS				NS	NS	146	399	208	11		
2F18	BRENDA MINE	Okanagan	1453	NS				193	NS	84	386	200	25		
2F18P	BRENDA MINE	Okanagan	1453	2014-02-01	N/A	171		69%	211	218	148	368	249	20	
2F19	OYAMA LAKE	Okanagan	1365	2014-01-31	54	44	A	37%	100	93	31	193	119	45	
2F20	VASEUX CREEK	Okanagan	1403	2014-01-30	61	110		126%	98	90	44	208	87	26	
2F21	BOULEAU LAKE	Okanagan	1405	NS				NS	NS	168	396	216	8		
2F23	MACDONALD LAKE	Okanagan	1742	NS				285	NS	132	411	273	16		

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2F24	ISLAHT LAKE	Okanagan	1492	NS				NS	210	124	364	225	30		
2F25	POSTILL LAKE (UPPER)	Okanagan	1500	2014-01-30	66	153		160	120	120	160	N/A	2		
2G03P	BLACKWALL PEAK	Similkameen	1934	2014-02-01	145	466		84%	512	737	158	1076	553	45	
2G04	LOST HORSE MOUNTAIN	Similkameen	1988	2014-01-27	56	150		108%	212	154	70	335	139	52	
2G05	MISSEZULA MOUNTAIN	Similkameen	1602	2014-01-27	50	133		92%	130	152	60	284	144	47	
2G06	HAMILTON HILL	Similkameen	1477	2014-01-28	43	106		50%	185	282	91	411	213	48	
3A01	GROUSE MOUNTAIN	South Coast	1126	2014-01-28	62	250		33%	1142	764	50	1530	761	63	
3A02	POWELL RIVER (UPPER)	South Coast	1002	NS				NS	NS			0	0		
3A05	POWELL RIVER (LOWER)	South Coast	882	NS				NS	NS	620	620	620	620	1	
3A09	PALISADE LAKE	South Coast	898	NS				NS	NS	318	914	616	616	3	
3A10	DOG MOUNTAIN	South Coast	1007	2014-01-27	62	280		39%	1071	696	206	1243	715	30	
3A19	ORCHID LAKE	South Coast	1178	2014-01-27	120	470		42%	1289	1341	408	1855	1114	34	
3A20	CALLAGHAN CREEK	South Coast	1009	2014-01-30	65	234		43%	552	638	50	1040	542	30	
3A22P	NOSTETUKO RIVER	South Coast	1457	2014-02-01	26	160		43%	279	524	120	780	368	24	
3A24P	UPPER MOSLEY CREEK	South Coast	1655	2014-02-01	50	162		67%	127	253	106	509	242	24	
3A25P	SQUAMISH RIVER (UPPER)	South Coast	1387	2014-02-01	150	503		46%	988	1173	555	1543	1087	23	
3B01	FORBIDDEN PLATEAU	Vancouver Island	1110	2014-02-04	76	253		27%	1091	1164	42	1640	922	53	
3B02A	MT. COKEY	Vancouver Island	1267	NS				NS	NS	234	1040	586	6		
3B04	ELK RIVER	Vancouver Island	270	2014-02-04	0	0		0%	82	77	0	544	61	53	
3B10	UPPER THELWOOD LAKE	Vancouver Island	1014	NS				NS	NS	28	1534	285	18		
3B13	HEATHER MOUNTAIN	Vancouver Island	1170	NS				NS	NS	0	257	362	7		
3B17P	WOLF RIVER	Vancouver Island	1422	2014-02-01	N/A	252		29%	877	918	162	1383	858	31	
3B18	WOLF RIVER (MIDDLE)	Vancouver Island	1050	2014-02-04	0	0		0%	544	324	0	742	400	41	
3B19	WOLF RIVER (LOWER)	Vancouver Island	615	2014-02-04	0	0		0%	368	254	0	572	244	40	
3B23P	JUMP CREEK	Vancouver Island	1134	2014-02-01	26	113		18%	823	653	8	1367	616	17	
3B24	HEATHER MOUNTAIN UPPER	Vancouver Island	N/A	NS											
3C07	WEDEENE RIVER SOUTH	North Coast	196	NS				NS	NS	105	497	304	13		
3C08P	BURNT BRIDGE CREEK	North Coast	1329	2014-02-01	144	526		91%	388	1119	248	1124	577	15	
3D01C	SUMALLO RIVER WEST	Skagit	801	2014-01-26	21	57		35%	NS	304	0	368	161	20	
3D02	LIGHTNING LAKE	Skagit	1254	NS				NS	NS	67	242	154	3		
3D03A	KLESILKWA	Skagit	1134	2014-01-26	18	60		33%	NS	229	0	508	180	51	
4A02	PINE PASS	Peace	1439	2014-01-31	250	955		115%	755	NS	411	1194	827	41	
4A02P	PINE PASS	Peace	1386	2014-02-01	N/A	839		113%	599	1257	469	1250	745	24	
4A03	WARE (UPPER)	Peace	1563	2014-01-29	63	166		90%	204	184	108	289	184	42	
4A04	WARE (LOWER)	Peace	969	2014-01-30	65	186		130%	137	160	63	286	143	43	
4A05	GERMANSEN (UPPER)	Peace	1489	2014-01-30	82	235		99%	216	325	140	371	237	44	
4A06	TUTIZZI LAKE	Peace	1043	2014-01-30	72	192		103%	175	277	109	348	186	44	
4A07	LADY LAURIER LAKE	Peace		2014-01-28	104	343		93%	290	679	226	679	369	41	
4A09	PULPIT LAKE	Peace	1331	2014-01-30	106	361		116%	328	375	190	530	312	43	
4A09P	PULPIT LAKE	Peace	1331	2014-02-01	N/A	350	E	108%	335	373	232	405	324	23	
4A10	FREDRICKSON LAKE	Peace	1323	2014-01-30	80	233		130%	135	197	110	309	179	43	
4A11	TRYGVE LAKE	Peace	1409	2014-01-30	77	224		85%	242	362	183	434	264	42	
4A12	TSAYDAYCHI LAKE	Peace	1173	2014-01-30	92	271		98%	232	430	146	507	277	44	
4A13	PHILIP LAKE	Peace	1013	2014-01-30	68	166		83%	204	272	118	355	199	45	
4A16	MORFEE MOUNTAIN	Peace	1427	2014-01-30	198	736		123%	606	733	323	952	597	45	
4A18	MOUNT SHEBA	Peace	1480	2014-01-31	202	759		134%	567	872	299	932	566	44	
4A20	MONKMAN CREEK	Peace	1566	2014-01-31	131	482		128%	366	NS	163	775	376	34	
4A21	MOUNT STEARNS	Peace	1514	2014-01-28	40	100		97%	115	98	40	196	103	39	

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Station ID	Name	Basin	Elevation (masl)	Survey Date YYYY-MM-DD	SD (cm)	SWE (mm)	Code	SWE % 1981-2010 Normal	2013 SWE (mm)	2012 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record
4A25	FORT ST. JOHN AIRPORT	Peace	692	2014-02-05	55	132		165%	121	60	22	154	80	38
4A27P	KWADACHA RIVER	Peace	1695	2014-02-01	N/A	238	E	102%	222	230	139	371	234	16
4A30P	AIKEN LAKE	Peace	1061	2014-02-01	N/A	194		101%	152	256	116	330	193	28
4B01	KIDPRICE LAKE	Skeena	1415	2014-02-01	141	512		77%	490	1220	420	1220	664	54
4B02	JOHANSON LAKE	Skeena	1480	2014-01-30	74	214		101%	184	272	115	355	211	42
4B03A	HUDSON BAY MTN	Skeena	1452	2014-01-30	110	340		94%	299	582	221	665	361	42
4B04	CHAPMAN LAKE	Skeena	1485	NS					NS	NS	0	0	0	0
4B06	TACHEK CREEK	Skeena	1133	2014-01-31	71	170		109%	142	198	99	298	156	17
4B07	MCKENDRICK CREEK	Skeena	1048	NS					NS	NS	264	264	N/A	1
4B08	MOUNT CRONIN	Skeena	1491	NS					NS	NS	0	0	0	0
4B10	NINGUNSAW PASS	Nass	647	2014-01-28	90	245		79%	242	462	171	603	312	35
4B11A	BEAR PASS	Nass	437	NS					315	710	192	821	455	28
4B12P	GRANDUC MINE	Skeena	790	2014-02-01	N/A	803		57%	762	1559	762	1639	1416	10
4B13A	TERRACE AIRPORT	Skeena	219	2014-01-30	9	18	T	14%	59	330	0	330	128	32
4B14	EQUITY MINE	Skeena	1434	NS					NS	NS	174	444	265	13
4B15	LU LAKE	Skeena	1296	NS					NS	NS	134	352	214	12
4B15P	LU LAKE	Skeena	1308	2014-02-01	70	214		111%	182	283	90	351	192	15
4B16P	SHEDIN CREEK	Skeena	1320	2014-02-01	164	499		81%	449	877	435	878	617	17
4B17P	TSAI CREEK	Skeena	1369	2014-02-01	134	561		68%	632	1483	630	1489	827	15
4B18P	CEDAR - KITEEN	Skeena	912	2014-02-01	489	613		126%	327	847	254	856	486	12
4C01	SIKANNI LAKE	Liard	1390	2014-01-29	86	256		133%	171	234	81	325	193	45
4C02	SUMMIT LAKE	Liard	1291	NS					NS	NS	36	146	91	17
4C03	DEASE LAKE	Liard	805	2014-01-27	73	218		216%	148	68	36	202	101	48
4C05	FORT NELSON A	Liard	368	2014-01-31	42	94		124%	113	46	35	128	76	47
4C15	JADE CITY	Liard	943	2014-01-29	82	260		158%	178	160	102	228	165	11
4D01	TELEGRAPH CREEK	Stikine	490	NS					NS	NS	51	244	110	19
4D02	ISKUT	Stikine	931	2014-01-28	39	90		110%	76	74	30	162	82	36
4E02B	ATLIN LAKE	Yukon		NS										

Code	Description
A	Sampling problems were encountered
ASP	Automated Snow Pillow
B	Early or late sample
C	Combination of A and B
E	Estimate
MSS	Manual Snow Survey
N/A	Not Available
N	Scheduled, but not measured
NS	Not Sampled
SD	Snow Depth
SWE	Snow Water Equivalent
T	Trace Amount



## Snow Survey and Water Supply Bulletin March 1<sup>st</sup>, 2014

The March 1<sup>st</sup> snow survey is now complete. Data from 142 snow courses and 51 snow pillows around the province and climate data from Environment Canada form the basis for the following report<sup>1</sup>.

### Weather

February weather was characterized by alternating periods of wet and cold. Temperatures through February were below average across the province, with moderate departures from normal along the South Coast, Vancouver Island and North Coast (1-3 °C below normal) and well below normal (5 °C or more below normal) through much of the BC Interior and North.

Precipitation patterns in February were variable across the province. Areas of the South Coast and Southern Vancouver Island and particularly in the regions around the Coquihalla, Skagit and Similkameen watersheds saw well above normal precipitation amounts. Other areas of the province experienced near normal or slightly below normal precipitation. Well below normal precipitation was experienced in the Skeena, Nchako, Chilcotin and Central Interior.

### Snowpack

Snow basin indices across the province range from a low of 52% of normal on Vancouver Island, to a high of 137% in the Liard and Upper Fraser (Table 1). Most regions of the province have normal to slightly below normal snow pack (85-110%; See Figure 1).

Increased precipitation in the south-west of the province led to increases in snow basin indices in the Lower Fraser, South Coast and Vancouver Island, however these regions remain well below average. Dry conditions in the Nchako basin led to a decline in the snow basin index value, which is currently at 69% of normal.

Normal values for the March 1st period for individual snow observation locations can be found in Appendix 2.

**Table 1 - BC Snow Basin Indices – March 1, 2014**

<b>Basin</b>	<b>% of Normal</b>	<b>Basin</b>	<b>% of Normal</b>
Upper Fraser	137	Okanagan-Kettle	94
Nechako	69	Similkameen	118
Middle Fraser	95	South Coast	54
Lower Fraser	67	Vancouver Island	52
North Thompson	91	Central Coast	81
South Thompson	100	Skagit	109
Upper Columbia	99	Peace	96
Lower Columbia	87	Skeena-Nass	85
East Kootenay	98	Stikine	86
West Kootenay	96	Northeast-Liard	137

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.



## Snow Survey and Water Supply Bulletin March 1<sup>st</sup>, 2014

### Outlook

By early March, generally about 80% of the annual BC snowpack has accumulated, with another 6-8 weeks still left in the accumulation season.

Snow packs in the Upper Fraser and Liard are elevated (>130% of normal) indicating an increased potential for increased seasonal flood risk. In other areas of the province, near-normal snow pack levels indicate a normal season flood risk. The overall Fraser River basin index for March 1<sup>st</sup> is 91% of normal. Seasonal weather during the snow melt season is an important factor in determining whether or not flooding will occur. Adverse weather, including extreme heat or extreme precipitation, can cause flooding in years with normal, or even below normal snow packs.

In the south-west (Vancouver Island, South Coast, and Lower Fraser) the low snow packs (52-67%) indicate that we can expect below normal seasonal runoff during the spring melt. Given the time of year, significantly wet weather is required over the next 1-2 months to recover the snow pack to normal levels. While lower than normal spring runoff can be expected, spring and summer weather conditions will be the key factor in determining whether or not drought and low flows will occur this summer.

Seasonal volume runoff forecasts (in Appendix below) have higher than normal runoff (>105%) forecasted in the Upper Fraser and upper Similkameen basins, near normal or slightly below normal runoff (90-105%) forecasted in the Middle Fraser, Thompson, Okanagan, lower Similkameen, and Skeena basins, and below normal runoff (<90%) forecasted in the Nicola and Bulkley basins.

The winter 2013-2014 has been characterized by neutral ENSO conditions. The Climate Prediction Centre at the U.S. National Weather Service/NOAA has begun to forecast an increased likelihood of the development of El Niño conditions into the spring/summer of 2014. El Niño years typically have increased winter temperatures and decreased winter precipitation.

Seasonal forecasts from Environment Canada indicate a modest chance of above normal temperatures for the March to May 2014 period. Forecasts for seasonal precipitation do not indicate an increased likelihood of any particular precipitation trend through the spring.

The River Forecast Centre will continue to monitor snow pack conditions and will provide an updated seasonal water supply and flood risk assessment in the April 2014 Snow Bulletin, scheduled for release on April 8, 2014.

Produced by: BC River Forecast Centre  
March 10, 2014

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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.

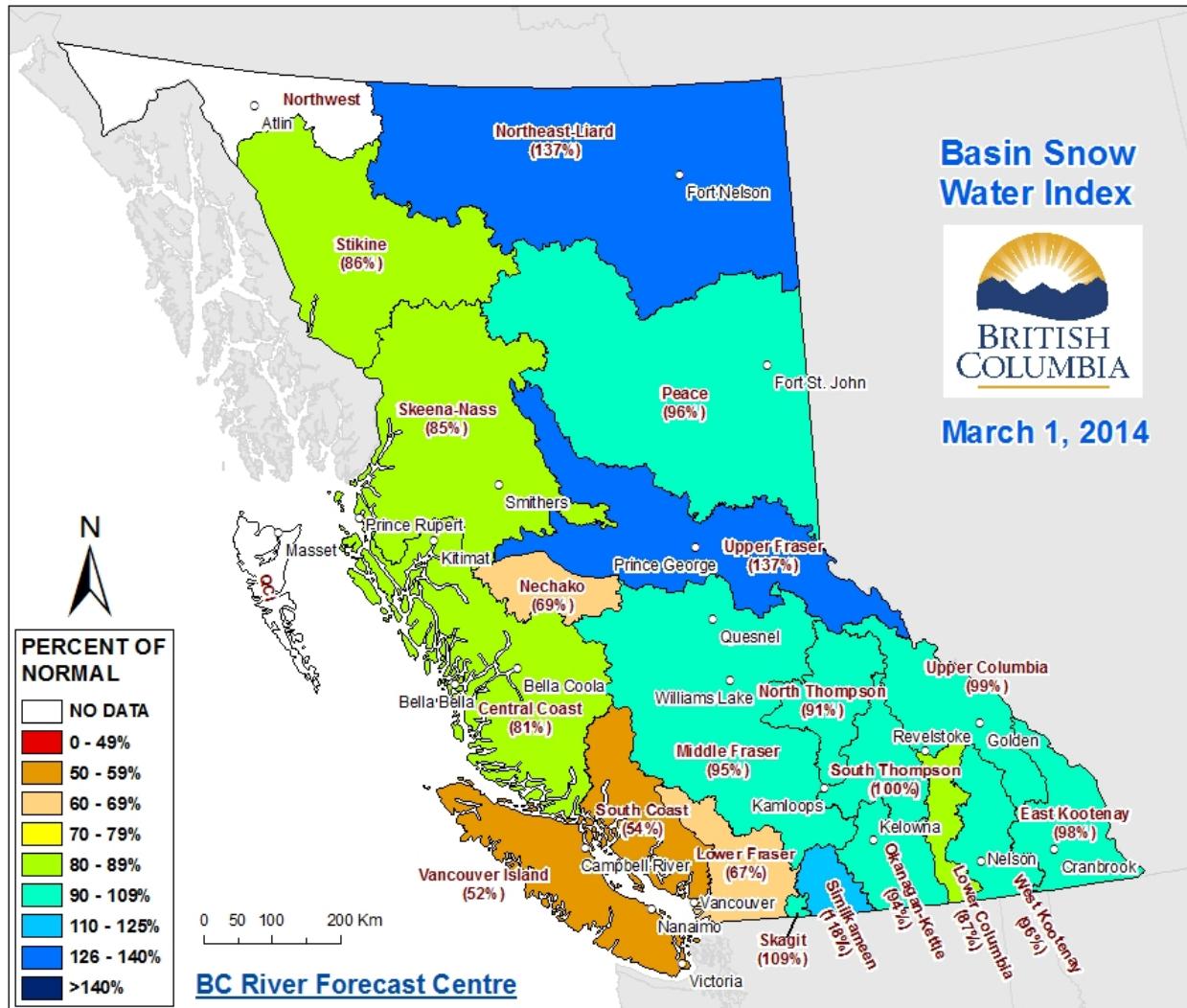


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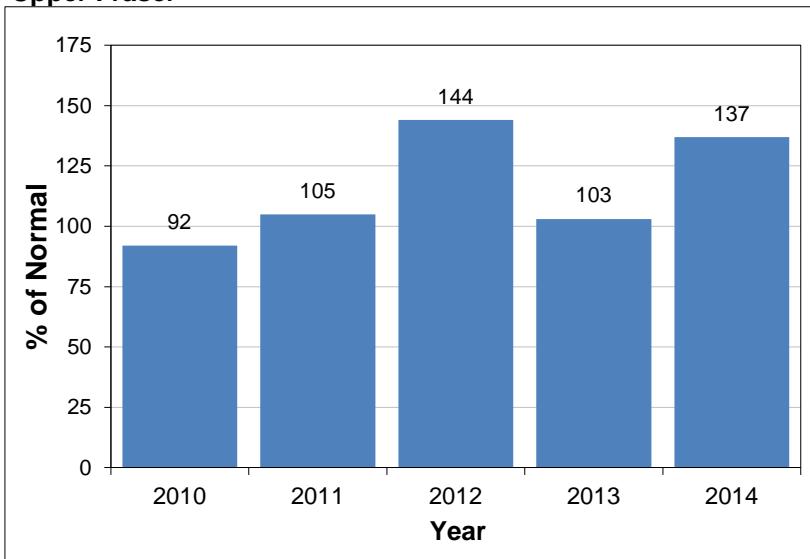
## Snow Survey and Water Supply Bulletin March 1<sup>st</sup>, 2014

Figure 1: Basin Snow Water Index – March 1<sup>st</sup>, 2014

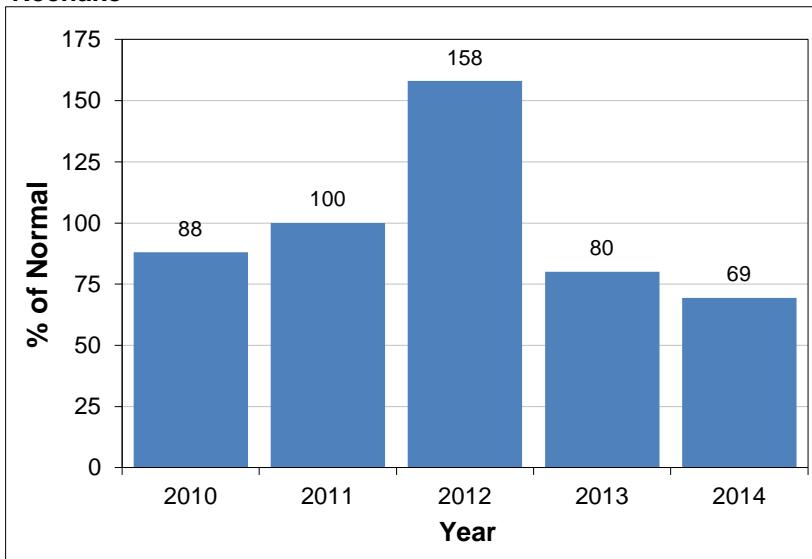


## Snow Basin Index Graphs - March 1, 2014

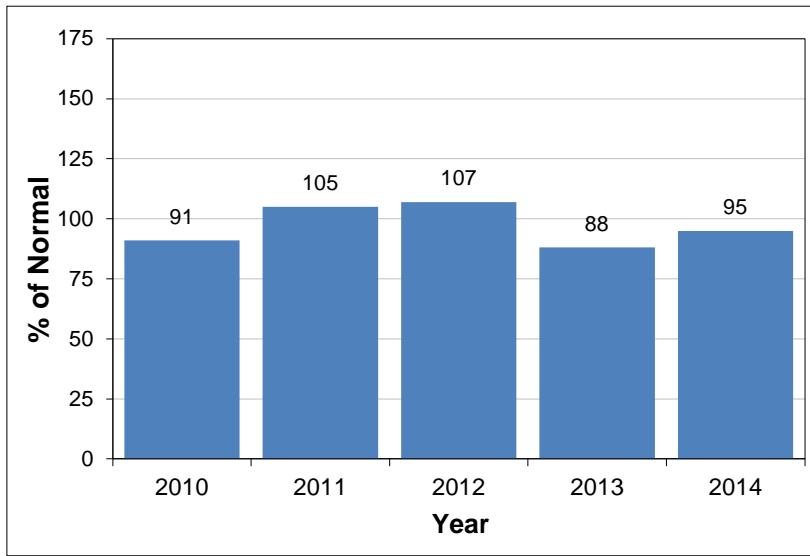
Upper Fraser



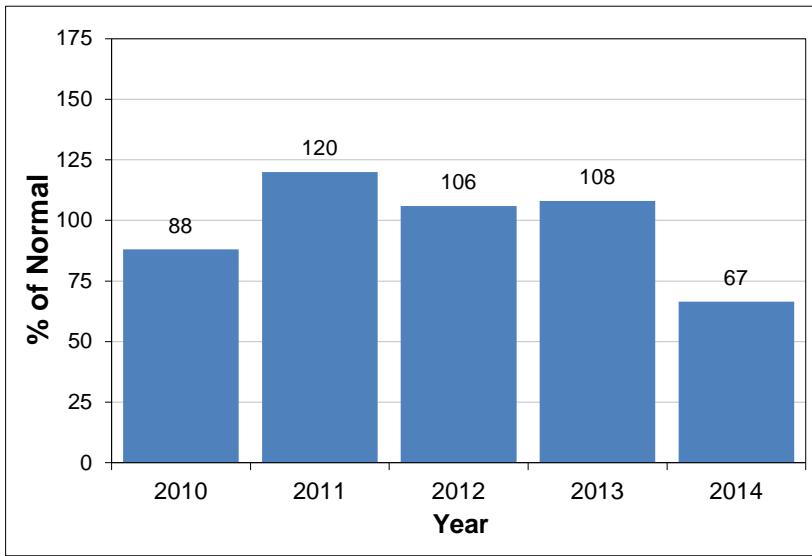
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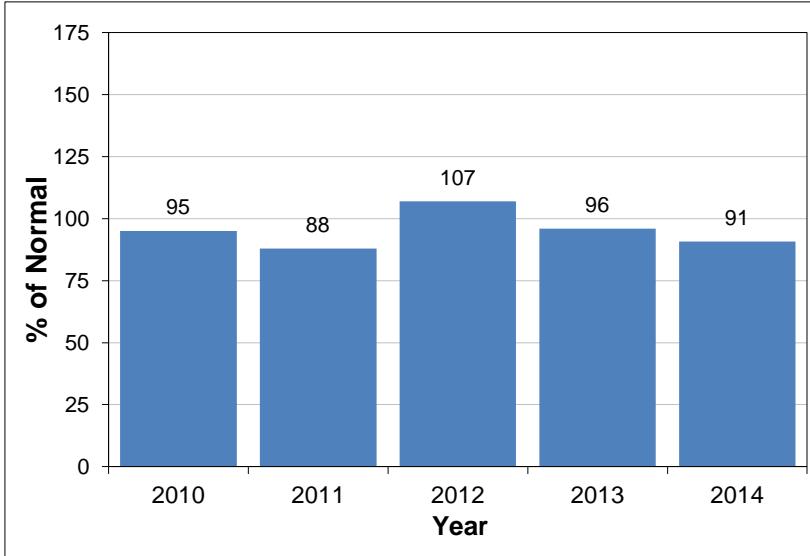
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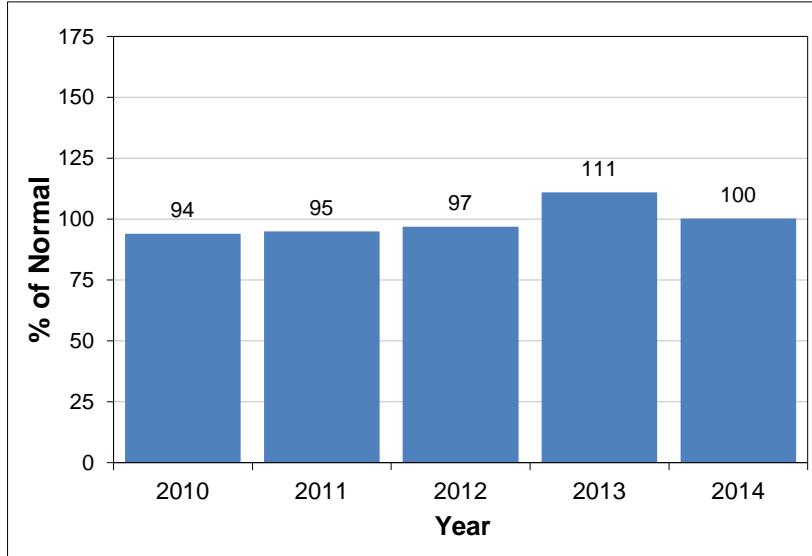
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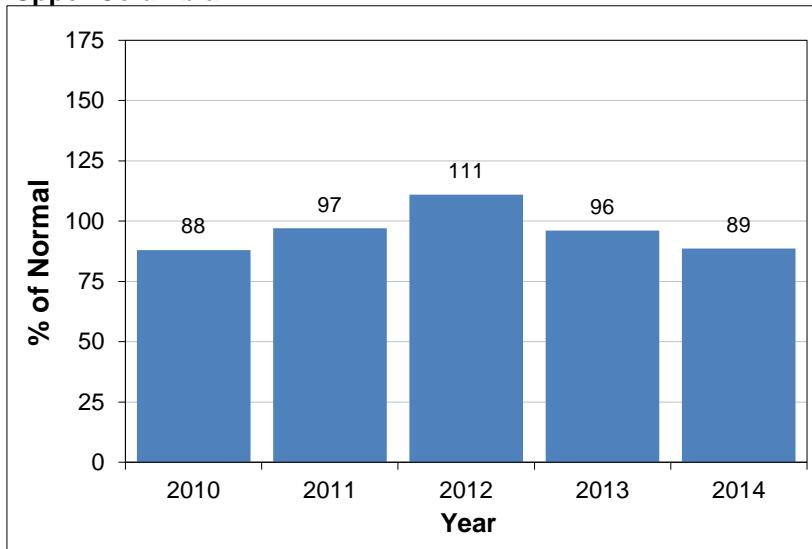
North Thompson



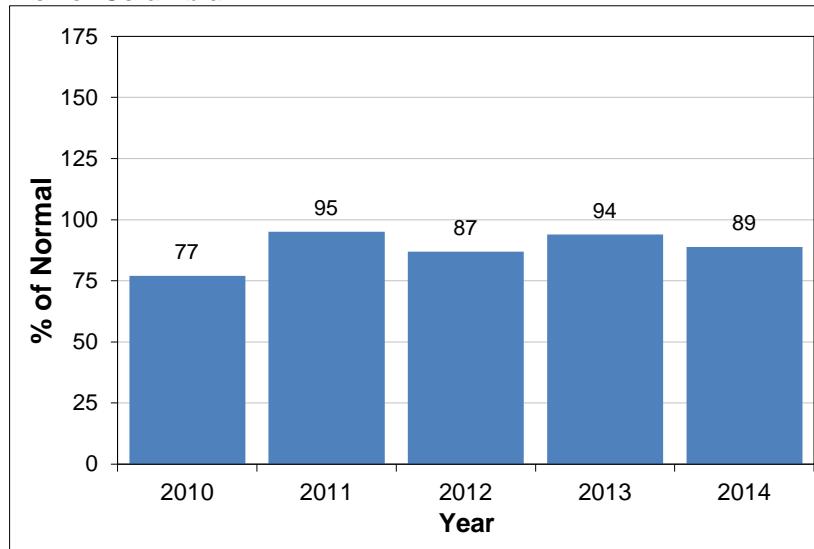
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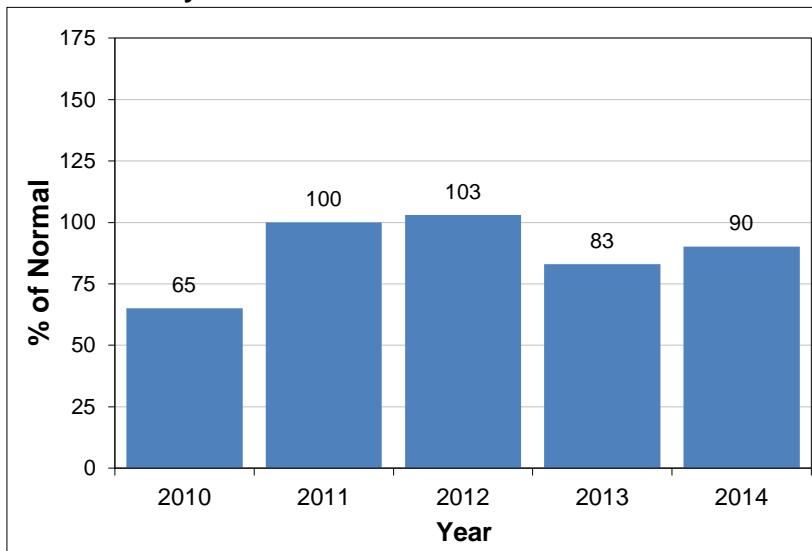
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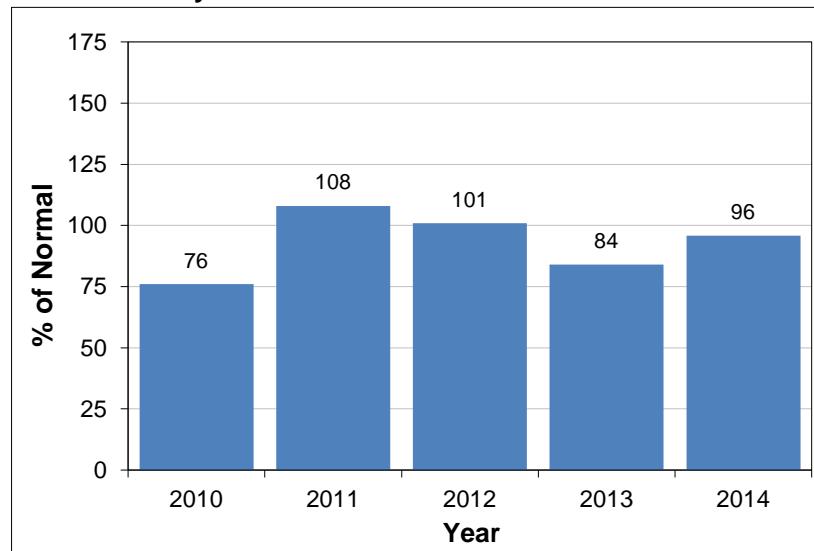
#### Lower Columbia



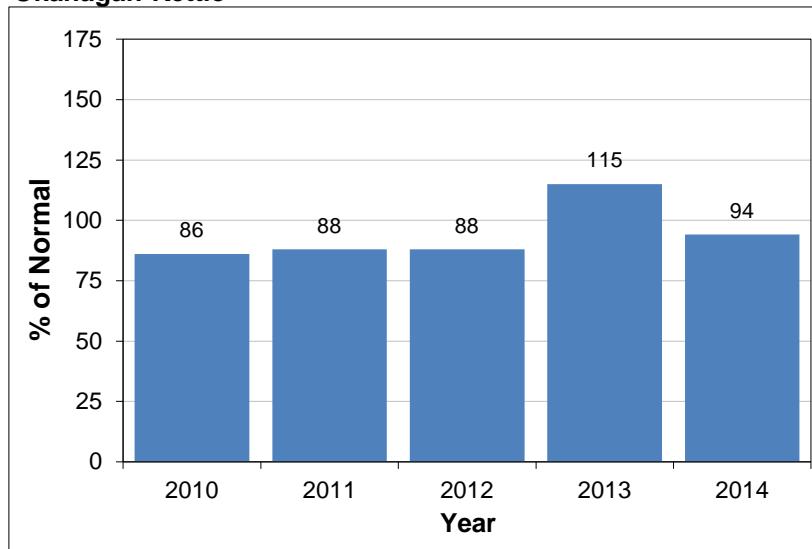
#### East Kootenay



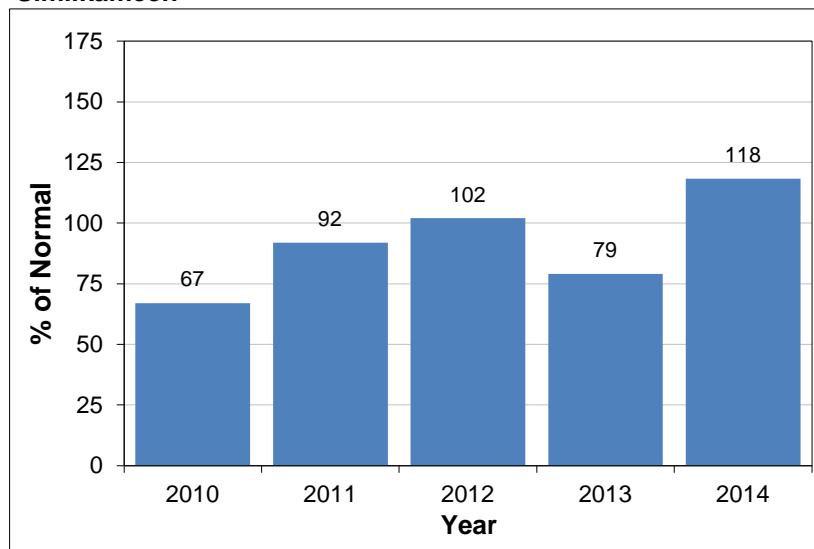
#### West Kootenay



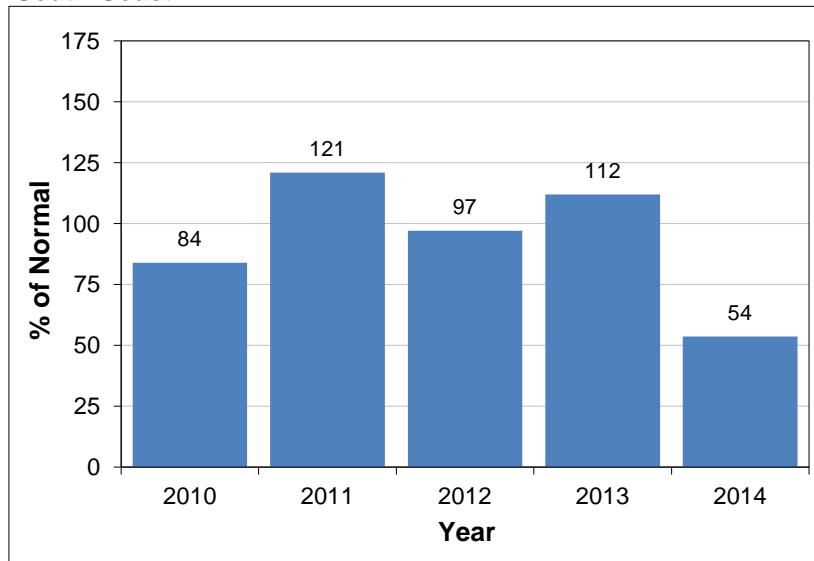
#### Okanagan-Kettle



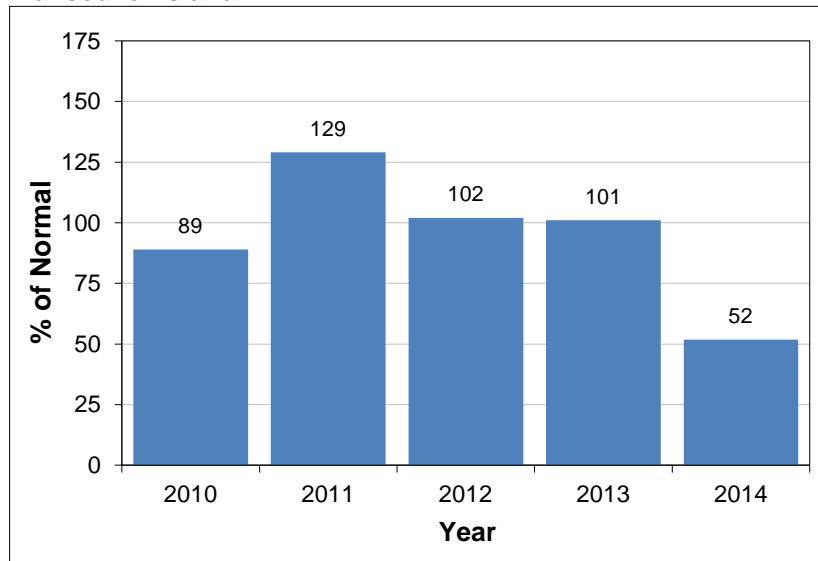
#### Similkameen



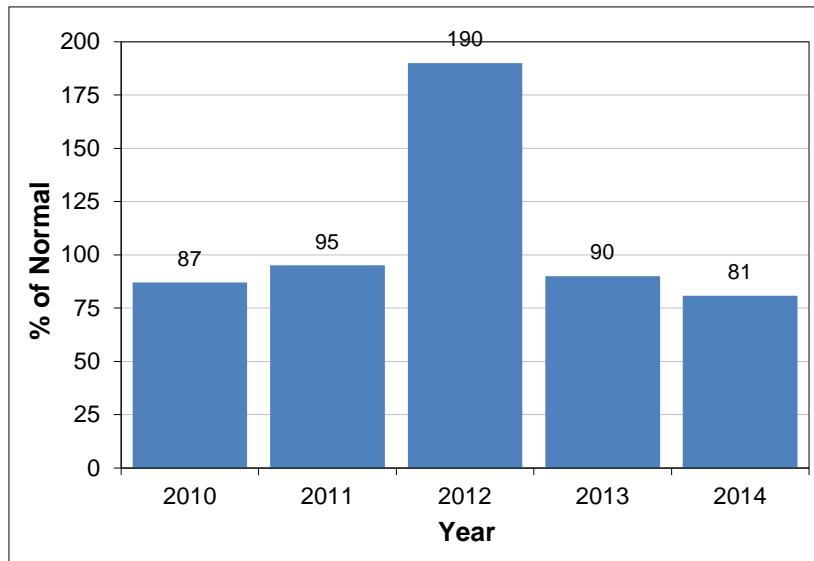
### South Coast



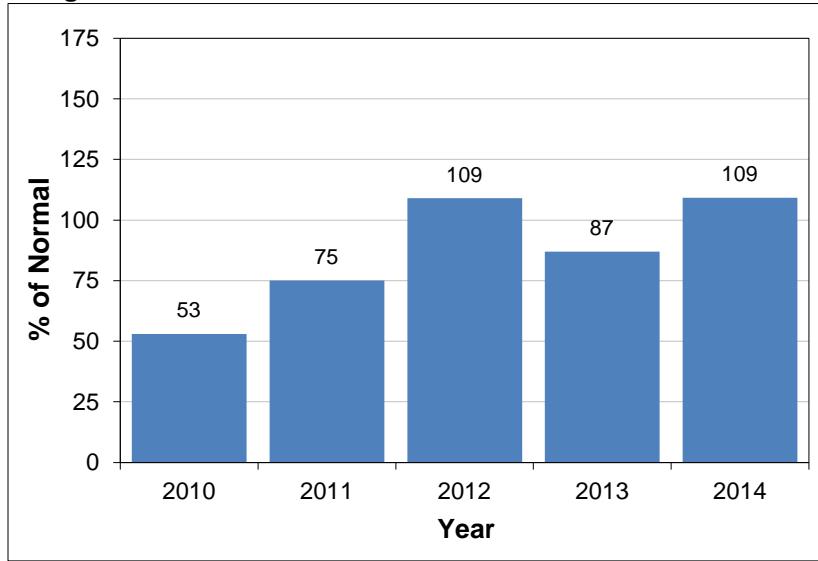
### Vancouver Island



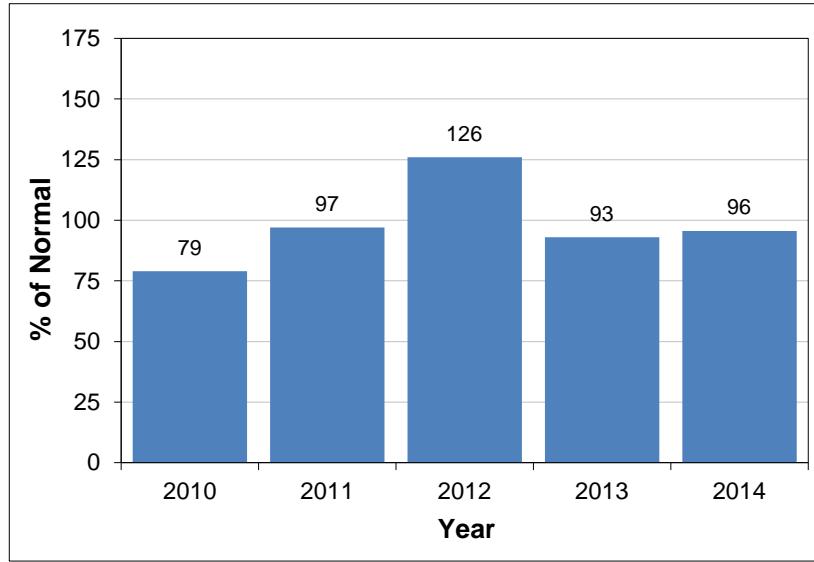
### Central Coast



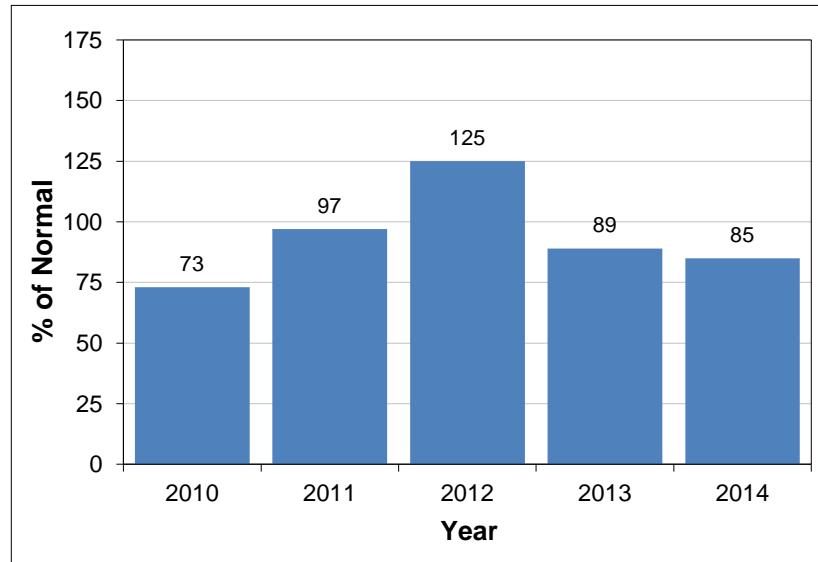
### Skagit

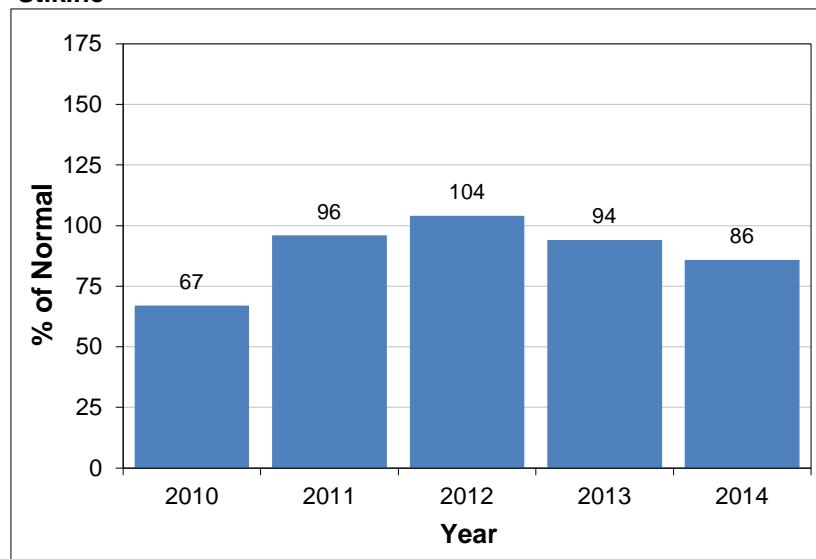
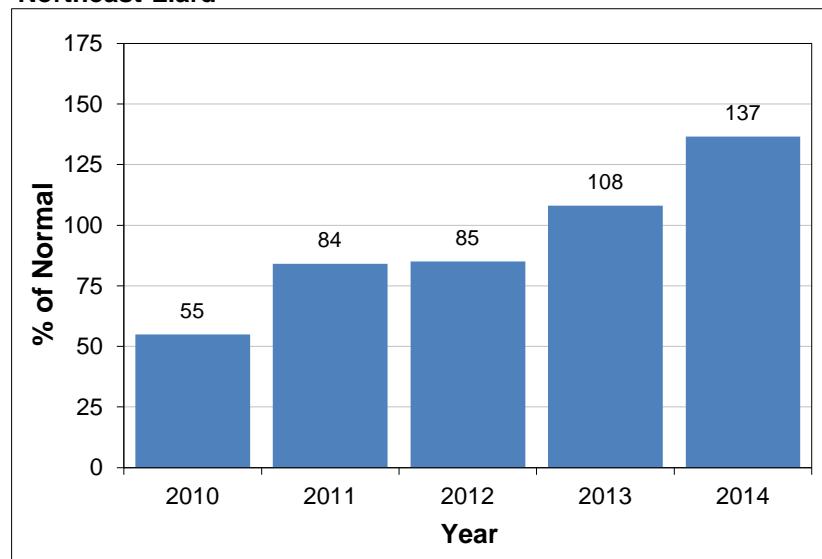


### Peace



### Skeena-Nass



**Stikine****Northeast-Liard**

**River Forecast Centre**  
**Ministry of Forests, Lands and Natural Resource Operations**  
**Volume Runoff Forecast March 2014**

<b>Location</b>	<b>Mar - Jun Runoff</b>				<b>Mar - Jul Runoff</b>				<b>Mar - Sep Runoff</b>				
	<b>Forecast (kdam<sup>3</sup>)</b>	<b>Normal (1981- 2010) (kdam<sup>3</sup>)</b>	<b>% of Normal</b>	<b>Std. Error (kdam<sup>3</sup>)</b>	<b>Forecast (kdam<sup>3</sup>)</b>	<b>Normal (1981- 2010) (kdam<sup>3</sup>)</b>	<b>% of Normal</b>	<b>Std. Error (kdam<sup>3</sup>)</b>	<b>Forecast (kdam<sup>3</sup>)</b>	<b>Normal (1981- 2010) (kdam<sup>3</sup>)</b>	<b>% of Normal</b>	<b>Std. Error (kdam<sup>3</sup>)</b>	
Upper Fraser Basin	Fraser at McBride					4018	3786	106	331	5575	5252	106	390
	McGregor at Lower Canyon					4977	4087	122	490	6115	5132	119	639
	Fraser at Shelley					19291	16310	118	1494	23396	20369	115	1832
Middle Fraser Basin	Quesnel River at Quesnel					4897	4747	103	510	6312	6078	104	670
Thompson Basin	N. Thompson at McLure					8681	9190	94	536	10865	11359	96	826
	Thompson at Spences Bridge					14455	15775	92	1174	18269	19755	92	1814
Bulkley and Skeena	Bulkley at Quick					2092	2709	77	1361	2628	3306	79	1939
	Skeena at Usk					17016	19187	89	1335	21314	23531	91	1809
Nicola Lake	Inflows	106	126	84	31	120	143	84	35				
Nicola River	at Spences Bridge	373	523	71	82	411	591	69	103				
Similkameen River	at Nighthawk	1390	1342	104	158					1702	1652	103	184
	at Hedley	1265	1045	121	134					1493	1233	121	151
Okanagan and Kalamalka-Wood Lake	Okanagan Lake with Greyback (2F08)	438	470	93	89	458	497	92	110				
	Kalamalka-Wood Lake	29	31	94	12	30	33	93	15				

Note: 1 kdam<sup>3</sup>=1,000,000 m<sup>3</sup>

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

2014 Automated Snow Pillow/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	2013 SWE (mm)	2012 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record
1A01P	YELLOWHEAD LAKE	Upper Fraser	1847	2014/03/01	117	403		91%	347	563	266	720	445	16
1A02P	MC BRIDE (UPPER)	Upper Fraser	1608	2014/03/01	144	430		116%	311	556	257	562	372	21
1A03P	BARKERVILLE	Upper Fraser	1483	2014/03/01	112	326		112%	287	353	150	479	292	38
1A05	LONGWORTH (UPPER)	Upper Fraser	1693	2014/02/27	302	1234		183%	804	954	307	1104	676	54
1A06A	HANSARD	Upper Fraser	622	2014/03/04	99	255		150%	357	167	44	396	170	41
1A10	PRINCE GEORGE A	Upper Fraser	684	2014/02/28	68	161		138%	140	131	0	296	117	52
1A11	PACIFIC LAKE	Upper Fraser	756	2014/02/27	253	851		156%	732	866	277	866	546	51
1A12	KAZA LAKE	Upper Fraser	1247	2014/02/26	99	303		103%	308	354	186	478	295	47
1A14P	HEDRICK LAKE	Upper Fraser	1118	2014/03/01	263	1011	E	155%	971	1058	386	1066	654	13
1A15	KNUDSEN LAKE	Upper Fraser	1598	2014/02/27	243	925		134%	735	1024	404	1098	692	43
1A16	BURNS LAKE	Upper Fraser	820	2014/02/26	57	120		92%	110	152	60	250	130	42
1A17P	REVOLUTION CREEK	Upper Fraser	1676	2014/03/01	259	966		143%	804	1135	336	1133	674	28
1A19P	DOME MOUNTAIN	Upper Fraser	1768	2014/03/01	221	768		126%	643	908	450	912	611	7
1A23	BIRD CREEK	Upper Fraser	1196	2014/03/01	60	128		98%	160	156	72	232	131	24
1B01	MOUNT WELLS	Nechako	1489	2014/03/01	113	351		78%	354	637	244	954	452	61
1B01P	MOUNT WELLS	Nechako	1489	2014/03/01	N/A	438		93%	341	712	244	739	470	21
1B02	TAHTSA LAKE	Nechako	1319	2014/03/01	209	675		65%	875	1777	571	1777	1034	62
1B02P	TAHTSA LAKE	Nechako	1319	2014/03/01	N/A	738		67%	776	1624	661	1725	1108	21
1B05	SKINS LAKE	Nechako	877	2014/03/01	33	68		66%	92	90	54	226	103	49
1B06	MOUNT SWANNELL	Nechako	1596	2014/03/01	81	177		70%	231	254	132	446	252	25
1B07	NUTLI LAKE	Nechako	1502	2014/03/01	103	278		60%	317	779	229	779	460	23
1B08P	MOUNT PONDOSY	Nechako	1413	2014/03/01	N/A	351		51%	442	986	363	995	686	21
1C01	BROOKMERE	Middle Fraser	994	2014/02/28	63	138		83%	172	190	53	351	167	69
1C05	MCGILLIVRAY PASS	Middle Fraser	1715	2014/02/26	122	305		62%	NS	555	222	1016	492	60
1C06	PAVILION	Middle Fraser	1209	NS					66	50	0	168	58	56
1C08	NAZKO	Middle Fraser	1029	2014/02/27	41	99		155%	75	62	0	142	64	36
1C09A	HIGHLAND VALLEY	Middle Fraser	1547	NS					108	96	25	229	77	48
1C12P	GREEN MOUNTAIN	Middle Fraser	1766	2014/03/01	N/A	387		52%	527	796	445	1265	751	19
1C13A	HORSEFLY MOUNTAIN	Middle Fraser	1612	2014/02/28	165	566		132%	534	408	238	624	428	40
1C14	BRALORNE	Middle Fraser	1382	2014/02/26	53	116		78%	158	98	0	363	149	50
1C17	MOUNT TIMOTHY	Middle Fraser	1632	2013/12/29	92	#N/A			285	329	141	468	266	51
1C18P	MISSION RIDGE	Middle Fraser	1903	2014/03/01	N/A	391		82%	383	563	160	866	475	43
1C19	GNAWED MOUNTAIN	Middle Fraser	1617	NS					122	122	15	259	96	46
1C20P	BOSS MOUNTAIN MINE	Middle Fraser	1477	2014/03/01	153	440		90%	475	460	308	739	487	19
1C21	BIG CREEK	Middle Fraser	1130	2014/02/26	34	80		167%	54	22	0	112	48	42
1C22	PUNTZI MOUNTAIN	Middle Fraser	939	2014/02/28	29	65		118%	60	44	0	128	55	43
1C23	PENFOLD CREEK	Middle Fraser	1687	2014/03/05	228	783		97%	NS	978	453	1132	807	37
1C25	LAC LE JEUNE (UPPER)	Middle Fraser	1471	2014/02/28	47	100		83%	147	104	13	213	120	41
1C28	DUFFEY LAKE	Middle Fraser	1253	2014/02/28	132	388		91%	390	534	194	762	428	35
1C29	SHOVELNOSE MOUNTAIN	Middle Fraser	1456	2014/02/28	96	235		109%	197	267	100	398	216	32
1C32	DEADMAN RIVER	Middle Fraser	1463	2014/03/01	68	146		146%	150	145	44	220	100	30
1C33A	GRANITE MOUNTAIN	Middle Fraser	1175	2014/02/27	58	192		111%	181	183	132	211	173	8
1C37	BRALORNE(UPPER)	Middle Fraser	1980	NS					NS	NS	268	944	543	17
1C38	DOWNTON LAKE (UPPER)	Middle Fraser	1884	NS					NS	804	302	1250	737	18
1C39	BRIDGE GLACIER (LOWER)	Middle Fraser	1393	2014/02/26	109	276		54%	430	522	146	954	508	19
1C40	TYAUGHTON CREEK (NORTH)	Middle Fraser	1946	2014/02/26	91	260		65%	138	410	138	916	399	19

2014 Automated Snow Pillow/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	2013 SWE (mm)	2012 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record
1C41P	YANKS PEAK, EAST	Middle Fraser	1683	2014/03/01	240	889		136%	728	781	406	904	655	16
1C42	CAVERHILL LAKE NEW	Middle Fraser	N/A	2014/03/01	82	230			60	218	60	270	N/A	9
1D06P	TENQUILLE LAKE	Lower Fraser	1669	2014/03/01	221	531		66%	727	951	518	1227	810	12
1D08	STAVE LAKE	Lower Fraser	1211	2014/02/25	263	823		70%	NS	1250	304	2500	1178	45
1D09	WAHLEACH LAKE	Lower Fraser	1395	2014/03/01	120	347		74%	652	570	86	1072	468	45
1D09P	WAHLEACH LAKE	Lower Fraser	1408	2014/03/01	N/A	574		68%	812	768	451	1320	846	21
1D10	NAHATLATCH RIVER	Lower Fraser	1530	NS					NS	NS	400	2380	1092	43
1D16	DICKSON LAKE	Lower Fraser	1147	NS					1810	1348	322	1814	1186	19
1D17P	CHILLIWACK RIVER	Lower Fraser	1621	2014/03/01	383	1477		122%	1422	1775	506	2353	1208	21
1D18P	DISAPPOINTMENT LAKE	Lower Fraser	932	2014/03/01	N/A	744	E	62%	1477	1367	259	1996	1192	13
1D19P	SPUZZUM CREEK	Lower Fraser	1197	2014/03/01	310	1089		83%	1583	1579	341	2615	1312	14
1E01B	BLUE RIVER	North Thompson	673	2014/03/01	128	378		135%	252	232	179	411	280	30
1E02P	MOUNT COOK	North Thompson	1574	2014/03/01	270	937		91%	1012	1164	821	1319	1028	13
1E03A	TROPHY MOUNTAIN	North Thompson	1907	2014/02/23	156	488		108%	432	537	216	778	452	39
1E05	KNOUFF LAKE	North Thompson	1189	2014/02/27	50	144		116%	150	125	36	284	124	55
1E07	ADAMS RIVER	North Thompson	1769	2014/02/23	165	525		94%	570	635	262	892	560	42
1E08P	AZURE RIVER	North Thompson	1625	2014/03/01	211	738		79%	999	1092	548	1339	934	16
1E10P	KOSTAL LAKE	North Thompson	1760	2014/03/01	226	708		99%	710	791	477	1023	712	28
1F01A	ABERDEEN LAKE	South Thompson	1262	2014/02/26	71	163		123%	140	144	51	231	133	57
1F02	ANGLEMONT	South Thompson	1168	2014/02/23	120	410		127%	304	314	160	635	323	56
1F03P	PARK MOUNTAIN	South Thompson	1857	2014/03/01	207	716		100%	756	630	383	1021	714	28
1F04	ENDERBY	South Thompson	1948	2014/02/28	237	812		97%	1030	NS	440	1200	840	47
1F06P	CELISTA MOUNTAIN	South Thompson	1533	2014/03/01	200	633		86%	782	752	596	923	739	8
2A01A	CANOE RIVER	Upper Columbia	866	2014/02/27	64	144		162%	132	126	19	251	89	72
2A02	GLACIER	Upper Columbia	1249	2014/02/23	196	620		106%	542	824	251	952	585	74
2A03A	FIELD	Upper Columbia	1310	2014/02/28	70	172		117%	82	128	53	248	147	73
2A06P	MOUNT REVELSTOKE	Upper Columbia	1770	2014/03/01	N/A	880		89%	985	1083	537	1487	992	20
2A07	KICKING HORSE	Upper Columbia	1648	2014/02/28	184	308		110%	241	245	140	462	279	67
2A11	BEAVERFOOT	Upper Columbia	1924	2014/02/24	74	166		99%	156	206	80	333	167	51
2A14	MOUNT ABBOT	Upper Columbia	2031	2014/02/22	295	939		94%	960	1294	508	1448	1000	52
2A16	GOLDSTREAM	Upper Columbia	1914	2014/02/23	282	907		95%	1006	1228	553	1351	954	49
2A17	FIDELITY MOUNTAIN	Upper Columbia	1852	2014/02/22	307	948		91%	963	1369	534	1703	1043	51
2A18	KEYSTONE CREEK	Upper Columbia	1839	2014/02/23	185	522		78%	720	862	357	1277	671	44
2A19	VERMONT CREEK	Upper Columbia	1533	2014/02/24	118	326		92%	360	427	152	643	356	47
2A21P	MOLSON CREEK	Upper Columbia	1930	2014/03/01	N/A	766		86%	851	1125	437	1215	887	32
2A22	SUNBEAM LAKE	Upper Columbia	2066	NS					814	NS	389	1117	751	43
2A23	BUSH RIVER	Upper Columbia	1982	NS					NS	NS	281	1078	682	42
2A25	KIRBYVILLE LAKE	Upper Columbia	1739	2014/02/23	263	801		81%	1138	1049	526	1476	990	41
2A27	DOWNIE SLIDE (LOWER)	Upper Columbia	964	2014/02/23	220	626		101%	620	NS	378	1018	618	31
2A29	DOWNIE SLIDE (UPPER)	Upper Columbia	1628	2014/02/23	288	930		81%	1240	1278	614	2120	1146	34
2B02A	FARRON	Lower Columbia	1229	2014/02/27	91	231		84%	253	197	79	450	276	39
2B05	WHATSHAN (UPPER)	Lower Columbia	1476	2014/02/25	171	529		93%	516	515	285	918	570	51
2B06	BARNES CREEK	Lower Columbia	1598	2014/02/25	145	426		100%	416	402	251	634	428	51
2B06P	BARNES CREEK	Lower Columbia	1595	2014/03/01	N/A	439		100%	439	431	229	690	437	20
2B07	KOCH CREEK	Lower Columbia	1813	2014/02/25	144	412		69%	714	529	269	996	601	48
2B08	ST. LEON CREEK	Lower Columbia	1828	2014/02/25	296	996		97%	1036	1044	500	1621	1031	43
2B08P	ST. LEON CREEK	Lower Columbia	1822	2014/03/01	N/A	822		91%	864	878	416	1392	900	20
2B09	RECORD MOUNTAIN	Lower Columbia	1906	2014/03/05	161	377		63%	745	480	147	1136	601	37

2014 Automated Snow Pillow/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	2013 SWE (mm)	2012 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record
2C01	SINCLAIR PASS	East Kootenay	1374	2014/03/03	52	112		109%	60	138	44	262	103	65
2C04	SULLIVAN MINE	East Kootenay	1580	2014/02/24	112	264		112%	214	264	53	465	235	67
2C07	FERNIE EAST	East Kootenay	1213	2014/02/28	103	270		100%	225	278	61	584	270	63
2C09Q	MORRISSEY RIDGE	East Kootenay	1966	2014/03/01	N/A	535		94%	488	514	233	1074	571	33
2C10P	MOYIE MOUNTAIN	East Kootenay	1840	2014/03/01	107	392		118%	299	418	149	653	333	34
2C11	KIMBERLEY (UPPER) VOR	East Kootenay	2148	NS					NS	NS	152	696	337	42
2C12	KIMBERLEY (MIDDLE) VOR	East Kootenay	1692	NS					NS	NS	97	386	207	41
2C14	FLOE LAKE	East Kootenay	2087	2014/02/24	190	532		85%	654	694	279	993	623	43
2C14P	FLOE LAKE	East Kootenay	2110	2014/03/01	N/A	518		89%	589	683	257	889	581	20
2C15	MOUNT ASSINIBOINE	East Kootenay	2230	NS					NS	NS	185	680	421	41
2C16	MOUNT JOFFRE	East Kootenay	1763	2014/02/24	117	292		100%	363	302	122	551	291	41
2C17	THUNDER CREEK	East Kootenay	2062	NS					274	272	91	378	214	42
2C20	VERMILLION RIVER NO. 3	East Kootenay	1612	NS					NS	NS	142	493	243	17
2D02	FERGUSON	West Kootenay	929	2014/02/26	179	526		105%	470	NS	283	796	502	58
2D03	SANDON	West Kootenay	1072	2014/03/02	110	300		94%	265	NS	196	475	319	34
2D04	NELSON	West Kootenay	952	2014/03/03	111	263		80%	194	288	140	558	328	74
2D05	GRAY CREEK (LOWER)	West Kootenay	1558	2014/02/26	139	423		112%	368	406	201	663	378	62
2D06	CHAR CREEK	West Kootenay	1290	2014/03/01	142	345		77%	425	477	231	754	447	46
2D07A	DUNCAN LAKE NO. 2	West Kootenay	662	2014/02/28	59	175		122%	52	172	52	322	144	22
2D08P	EAST CREEK	West Kootenay	2004	2014/03/01	N/A	581		79%	768	750	312	1167	732	32
2D09	MOUNT TEMPLEMAN	West Kootenay	1879	NS					NS	NS	490	1534	859	38
2D10	GRAY CREEK (UPPER)	West Kootenay	1926	2014/02/26	194	604		100%	659	667	343	955	607	42
2D14P	REDFISH CREEK	West Kootenay	2086	2014/03/01	264	899		94%	1067	1241	772	1256	954	11
2E01	MONASHEE PASS	Kettle	1387	2014/02/25	112	330		117%	285	283	149	442	282	54
2E02	CARMI	Kettle	1254	2014/02/26	51	91		70%	132	121	56	274	130	51
2E03	BIG WHITE MOUNTAIN	Kettle	1672	2014/02/27	128	364		91%	428	355	213	676	402	48
2E06	BLUEJOINT MOUNTAIN	Kettle	1990	2014/02/25	148	433		65%	716	448	448	773	667	7
2E07P	GRANO CREEK	Kettle	1874	2014/03/01	118	198		48%	387	363	206	679	411	15
2F01	TROUT CREEK	Okanagan	1428	2014/02/27	88	210		135%	197	228	55	335	156	74
2F01A	TROUT CREEK (WEST)	Okanagan	1430	NS					169	229	169	229	196	4
2F02	SUMMERLAND RESERVOIR	Okanagan	1304	2014/02/26	95	230		121%	181	234	97	381	190	53
2F03	MC CULLOCH	Okanagan	1266	2014/02/28	74	157		108%	179	NS	71	249	146	73
2F04	GRAYSTOKE LAKE	Okanagan	1818	2014/03/05	118	356		125%	290	288	128	605	285	30
2F05P	MISSION CREEK	Okanagan	1794	2014/03/01	131	453		116%	458	395	208	608	392	43
2F07	POSTILL LAKE	Okanagan	1358	2014/02/27	69	172		99%	169	186	98	274	173	64
2F08	GRAYBACK RESERVOIR	Okanagan	1548	2014/02/26	86	217		115%	218	214	91	312	188	46
2F09	WHITEROCKS MOUNTAIN	Okanagan	1789	2014/02/25	120	340		76%	487	427	180	809	450	57
2F10	SILVER STAR MOUNTAIN	Okanagan	1834	2014/03/01	161	577		95%	749	588	347	912	610	55
2F11	ISINTOK LAKE	Okanagan	1651	2014/02/27	76	133		101%	151	171	53	358	132	49
2F12	MOUNT KOBAU	Okanagan	1817	2014/02/28	78	169		67%	447	164	61	488	253	48
2F13	ESPERON CR (UPPER)	Okanagan	1634	2014/02/25	95	266		81%	354	284	157	635	330	45
2F14	ESPERON CR (MIDDLE)	Okanagan	1440	NS					NS	NS	132	513	287	24
2F18	BRENDA MINE	Okanagan	1453	2014/02/27	89	227		90%	200	227	130	495	252	45
2F18P	BRENDA MINE	Okanagan	1453	2014/03/01	N/A	243		77%	258	296	184	431	315	20
2F19	OYAMA LAKE	Okanagan	1365	2014/02/28	67	124		86%	110	118	73	241	144	44
2F20	VASEUX CREEK	Okanagan	1403	2014/02/23	73	144		127%	114	106	52	284	113	42
2F21	BOULEAU LAKE	Okanagan	1405	2014/02/23	83	184		69%	276	220	165	432	267	42
2F23	MACDONALD LAKE	Okanagan	1742	2014/02/27	109	278		76%	323	314	170	583	368	37

2014 Automated Snow Pillow/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	2013 SWE (mm)	2012 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record
2F24	ISLAHT LAKE	Okanagan	1492	2014/02/27	89	178		62%	286	234	161	497	285	32
2F25	POSTILL LAKE (UPPER)	Okanagan	1500	2014/02/27	73	198			217	213	131	217	N/A	4
2G03P	BLACKWALL PEAK	Similkameen	1934	2014/03/01	245	747		112%	593	861	228	1323	665	45
2G04	LOST HORSE MOUNTAIN	Similkameen	1988	2014/02/28	102	251		141%	218	187	92	508	178	51
2G05	MISSEZULA MOUNTAIN	Similkameen	1602	2014/02/28	100	249		137%	142	210	76	363	182	50
2G06	HAMILTON HILL	Similkameen	1477	2014/02/27	114	269		101%	211	325	102	676	267	49
3A01	GROUSE MOUNTAIN	South Coast	1126	2014/02/25	185	560		58%	1640	1152	143	2320	966	63
3A02	POWELL RIVER (UPPER)	South Coast	1002	NS					NS	NS	868	868	868	1
3A05	POWELL RIVER (LOWER)	South Coast	882	NS					NS	NS	588	588	588	1
3A09	PALISADE LAKE	South Coast	898	2014/02/26	202	630		57%	1455	1120	95	3150	1106	50
3A10	DOG MOUNTAIN	South Coast	1007	2014/02/26	177	560		59%	1440	937	256	2146	952	30
3A19	ORCHID LAKE	South Coast	1178	2014/02/26	292	730		50%	1770	1335	444	2960	1467	38
3A20	CALLAGHAN CREEK	South Coast	1009	2014/02/28	165	474		68%	734	840	200	1260	702	34
3A22P	NOSTETUKO RIVER	South Coast	1457	2014/03/01	40	263		57%	354	582	165	876	462	24
3A24P	UPPER MOSLEY CREEK	South Coast	1655	2014/03/01	60	175		66%	127	288	98	555	266	24
3A25P	SQUAMISH RIVER (UPPER)	South Coast	1387	2014/03/01	242	786		60%	1353	1392	574	2301	1303	23
3B01	FORBIDDEN PLATEAU	Vancouver Island	1110	2014/02/27	229	632		53%	1417	1367	101	2730	1203	58
3B02A	MT. COKEY	Vancouver Island	1267	NS					NS	682	34	1034	662	30
3B04	ELK RIVER	Vancouver Island	270	2014/02/27	32	92		159%	0	55	0	546	58	53
3B10	UPPER THELWOOD LAKE	Vancouver Island	1014	2014/02/27	220	67		6%	1588	1428	126	2440	1128	53
3B13	HEATHER MOUNTAIN	Vancouver Island	1170	NS					NS	NS	0	1803	530	26
3B17P	WOLF RIVER	Vancouver Island	1422	2014/03/01	N/A	555		51%	1070	1149	195	2085	1085	31
3B18	WOLF RIVER (MIDDLE)	Vancouver Island	1050	2014/02/27	113	252		50%	696	442	20	1344	509	43
3B19	WOLF RIVER (LOWER)	Vancouver Island	615	2014/02/27	92	220		73%	438	346	0	1064	301	43
3B23P	JUMP CREEK	Vancouver Island	1134	2014/03/01	183	598		70%	1243	861	64	2228	849	17
3B24	HEATHER MOUNTAIN UPPER	Vancouver Island	N/A	NS					NS	NS	N/A	N/A	N/A	0
3C07	WEDEENE RIVER SOUTH	North Coast	196	2014/02/27	107	291		70%	417	945	45	945	418	27
3C08P	BURNT BRIDGE CREEK	North Coast	1329	2014/03/01	189	635		92%	583	1231	282	1245	691	15
3D01C	SUMALLO RIVER WEST	Skagit	801	2014/02/28	107	265		122%	246	306	7	442	218	21
3D02	LIGHTNING LAKE	Skagit	1254	2014/03/01	100	244		98%	244	357	36	497	250	40
3D03A	KLESIKWA	Skagit	1134	2014/02/28	100	247		108%	268	263	0	759	228	58
4A02	PINE PASS	Peace	1439	2014/02/26	285	1051		100%	968	1622	480	1622	1051	50
4A02P	PINE PASS	Peace	1386	2014/03/01	N/A	917		104%	878	1336	600	1485	880	24
4A03	WARE (UPPER)	Peace	1563	2014/02/25	70	196		89%	247	203	114	360	220	52
4A04	WARE (LOWER)	Peace	969	2014/02/25	72	199		119%	171	167	97	246	167	47
4A05	GERMANSEN (UPPER)	Peace	1489	2014/02/26	92	265		90%	274	378	174	520	293	52
4A06	TUTIZZI LAKE	Peace	1043	2014/02/26	86	234		102%	229	298	140	386	230	49
4A07	LADY LAURIER LAKE	Peace		2014/02/24	127	369		82%	379	609	255	662	452	47
4A09	PULPIT LAKE	Peace	1331	2014/02/25	116	366		98%	426	427	233	531	372	49
4A09P	PULPIT LAKE	Peace	1331	2014/03/01	N/A	332		87%	388	417	271	471	381	23
4A10	FREDRICKSON LAKE	Peace	1323	2014/02/26	91	249		117%	189	215	129	315	213	48
4A11	TRYGVE LAKE	Peace	1409	2014/02/25	92	266		83%	312	392	211	453	319	48
4A12	TSAYDAYCHI LAKE	Peace	1173	2014/02/26	109	308		91%	322	504	166	540	340	49
4A13	PHILIP LAKE	Peace	1013	2014/02/26	90	221		91%	244	312	138	400	242	49
4A16	MORFEE MOUNTAIN	Peace	1427	2014/02/26	223	836		115%	696	911	312	1166	725	46
4A18	MOUNT SHEBA	Peace	1480	2014/02/27	252	892		125%	NS	998	394	1123	712	42
4A20	MONKMAN CREEK	Peace	1566	2014/02/27	165	567		120%	539	658	211	925	472	30
4A21	MOUNT STEARNS	Peace	1514	2014/02/24	51	115		93%	136	95	56	227	124	39

2014 Automated Snow Pillow/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	2013 SWE (mm)	2012 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record
4A25	FORT ST. JOHN AIRPORT	Peace	692	2014/03/04	66	133		134%	129	69	38	191	99	39
4A27P	KWADACHA RIVER	Peace	1695	2014/03/01	N/A	274	E	98%	263	259	203	405	279	16
4A30P	AIKEN LAKE	Peace	1061	2014/03/01	N/A	220		95%	180	285	150	363	232	28
4B01	KIDPRICE LAKE	Skeena	1415	2014/03/01	153	534		65%	636	1320	429	1320	817	62
4B02	JOHANSON LAKE	Skeena	1480	2014/02/26	88	250		99%	237	294	148	368	253	49
4B03A	HUDSON BAY MTN	Skeena	1452	2014/02/27	122	393		89%	356	616	287	719	443	42
4B04	CHAPMAN LAKE	Skeena	1485	2014/02/25	109	339		83%	364	575	266	691	407	47
4B06	TACHEK CREEK	Skeena	1133	NS					184	272	117	332	195	46
4B07	MCKENDRICK CREEK	Skeena	1048	2014/02/25	95	270		110%	226	340	155	391	246	43
4B08	MOUNT CRONIN	Skeena	1491	2014/02/25	114	356		71%	454	627	345	869	498	43
4B10	NINGUNSAW PASS	Nass	647	2014/02/28	108	336		85%	330	375	224	629	397	39
4B11A	BEAR PASS	Nass	437	2014/02/28	171	619		108%	510	87	87	824	574	28
4B12P	GRANDUC MINE	Skeena	790	2014/03/01	N/A	842		54%	1007	1636	999	1958	1559	10
4B13A	TERRACE AIRPORT	Skeena	219	2014/02/27	27	56		40%	0	335	0	407	141	31
4B14	EQUITY MINE	Skeena	1434	2014/02/27	101	278		83%	274	470	190	546	333	36
4B15	LU LAKE	Skeena	1296	2014/02/27	86	206		81%	210	358	122	412	254	35
4B15P	LU LAKE	Skeena	1308	2014/03/01	86	247		112%	218	355	116	405	221	15
4B16P	SHEDIN CREEK	Skeena	1320	2014/03/01	175	505		70%	619	957	507	957	723	17
4B17P	TSAI CREEK	Skeena	1369	2014/03/01	173	587		61%	810	1601	701	1618	969	15
4B18P	CEDAR - KITEEN	Skeena	912	2014/03/01	165	666		114%	477	936	280	956	582	12
4C01	SIKANNI LAKE	Liard	1390	2014/02/25	98	270		113%	215	240	107	335	238	48
4C02	SUMMIT LAKE	Liard	1291	2014/03/05	49	117		105%	166	78	0	190	111	43
4C03	DEASE LAKE	Liard	805	2014/02/28	78	198		160%	153	81	45	229	124	48
4C05	FORT NELSON A	Liard	368	2014/03/04	47	102		111%	135	50	40	177	92	47
4C15	JADE CITY	Liard	943	2014/02/25	86	270		131%	224	186	128	310	206	12
4D01	TELEGRAPH CREEK	Stikine	490	NS					116	NS	53	345	144	38
4D02	ISKUT	Stikine	931	2014/02/28	41	80		76%	86	108	33	176	105	39
4E02B	ATLIN LAKE	Yukon		NS					106	NS	70	166		9

Code	Description
A	Sampling problems were encountered
ASP	Automated Snow Pillow
B	Early or late sample
C	Combination of A and B
E	Estimate
MSS	Manual Snow Survey
N/A	Not Available
N	Scheduled, but not measured
NS	Not Sampled
SD	Snow Depth
SWE	Snow Water Equivalent
T	Trace Amount



## Snow Survey and Water Supply Bulletin April 1<sup>st</sup>, 2014

The April 1<sup>st</sup> snow survey is now complete. Data from 155 snow courses and 51 snow pillows around the province and climate data from Environment Canada form the basis for the following report<sup>1</sup>.

### Weather

For most of March warm, moist air masses affected much of the south and west parts of the province, and cold arctic air was prevalent over northern and interior areas. Temperatures through March were below average across the North and Interior (1-4 °C below normal), and variable, but near normal through the South Interior, Kootenay and Columbia. Minimum temperatures were above normal through the South Coast, Vancouver Island, and areas of the Okanagan (0.5-2 °C above normal).

Precipitation patterns in March were variable across the province. The south half of the province saw above normal precipitation, with well above normal precipitation observed in the eastern Fraser Valley, southern Vancouver Island, and in the Rockies. Below normal precipitation was experienced in the Peace, Liard and Skeena regions.

### Snowpack

Snow basin indices across the province range from a low of 60% of normal on Vancouver Island, to a high of 136% in the Upper Fraser (Table 1). Wetter weather patterns in the south of the province led to increases in snow basin index values in the South Coast, Lower Fraser and Vancouver Island. Despite increases in snow pack, snow basin index values remain moderately low on the South Coast (75%) and low on Vancouver Island (60%). Higher than normal snow packs (>120%) are present in the Upper Fraser, Liard, Similkameen and Skagit basins. Other regions of the province have near normal (80-120%) snowpack.

**Table 1 - BC Snow Basin Indices – April 1, 2014**

Basin	% of Normal	Basin	% of Normal
Upper Fraser	136	Okanagan-Kettle	97
Nechako	80	Similkameen	124
Middle Fraser	96	South Coast	75
Lower Fraser	83	Vancouver Island	60
North Thompson	97	Central Coast	99
South Thompson	105	Skagit	143
Upper Columbia	98	Peace	96
Lower Columbia	99	Skeena-Nass	85
East Kootenay	118	Stikine	82
West Kootenay	118	Northeast-Liard	124
Northwest	110		

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.



## Snow Survey and Water Supply Bulletin April 1<sup>st</sup>, 2014

### Outlook

Typically the peak of the snow accumulation season in BC occurs in the middle of April with a transition from accumulation to snow melt at higher elevations. Therefore the April 1<sup>st</sup> snow survey data is a good reflection of the overall seasonal snow pack that is available for melt during freshet.

Snow packs in the Upper Fraser, Liard, and Similkameen are elevated (>120% of normal) indicating elevated seasonal flood risk. In the Upper Fraser basin, snow packs are below levels observed in 2012, and while some individual survey locations are at or above historic levels (e.g. 1A05 Longworth-Upper), the 2013 basin index is the 6<sup>th</sup> highest snow pack in 62 years of record. In the Liard basin, snow packs exceed conditions observed in 2012. In the Skagit basin, the elevated snow basin index (143%) reflects higher than normal snow pack at mid-elevations. Due to limited elements at risk on the Skagit floodplain, and that peak flows on the river typically occur during fall-winter rainstorm events, higher than normal snow packs in the watershed pose limited risk for freshet flooding.

In other areas of the province, near-normal snow pack levels indicate a normal seasonal flood risk. In the Fraser basin, high snow pack levels in the upper headwaters are moderated by near-normal and below normal snow packs in other major tributaries. The overall Fraser River basin index for April 1<sup>st</sup> is 99% of normal. The forecasted peak flow (i.e. a 50% chance of a peak flow below this value, and a 50% chance of flows exceeding this estimate) for the Fraser River at Hope is 8600 m<sup>3</sup>/s, or approximately the 2-year flow or mean annual peak.

Seasonal weather during the snow melt season is a critical factor in determining whether or not flooding will occur. Adverse weather, including extreme heat or extreme precipitation, can cause flooding in years with normal, or even below normal snow packs.

In the south-west (Vancouver Island and South Coast, and Lower Fraser) the low snow packs (60-75%) indicate that we can expect below normal seasonal runoff during the spring melt. While lower than normal spring runoff can be expected, spring and summer weather conditions will be the key factor in determining whether or not drought and low flows will occur this summer.

Seasonal volume runoff forecasts (in Appendix below) indicate higher than normal runoff forecasted in the Upper Fraser and Similkameen basins, near normal or slightly below normal runoff (90-105%) forecasted in the Middle Fraser, Thompson, Okanagan, Skeena and Cowichan basins, and below normal runoff (<90%) forecasted in the Nicola and Bulkley basins. Actual seasonal volume runoff can vary greatly depending on spring and summer weather conditions.

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## Snow Survey and Water Supply Bulletin April 1<sup>st</sup>, 2014

The winter 2013-2014 has been characterized by neutral ENSO conditions. The Climate Prediction Centre at the U.S. National Weather Service/NOAA is currently forecasting approximately a 50% chance of the emergence of El Niño conditions into the summer. El Niño years typically have increased winter temperatures and decreased winter precipitation, and while this may not play a role in terms of 2014 summer weather, it may become a factor for the 2014-15 snow season.

Seasonal forecasts from Environment Canada indicate an increased chance of above normal temperatures for the April to June 2014 period through most of British Columbia, with the highest likelihood of above normal temperatures on Vancouver Island and south-west BC. Forecasts for seasonal precipitation do not indicate an increased likelihood of any particular precipitation trend through the spring.

Current medium-range forecasts from the North American Ensemble Forecast System indicate a high likelihood of above normal temperatures through the April 15-22 period. This extended forecast suggests that the seasonal transition to snow pack melt will likely occur over the next couple of weeks.

The River Forecast Centre will continue to monitor snow pack conditions and will provide an updated seasonal water supply and flood risk assessment in the May 2014 Snow Bulletin, scheduled for release on May 8, 2014.

Produced by: BC River Forecast Centre  
April 8, 2014

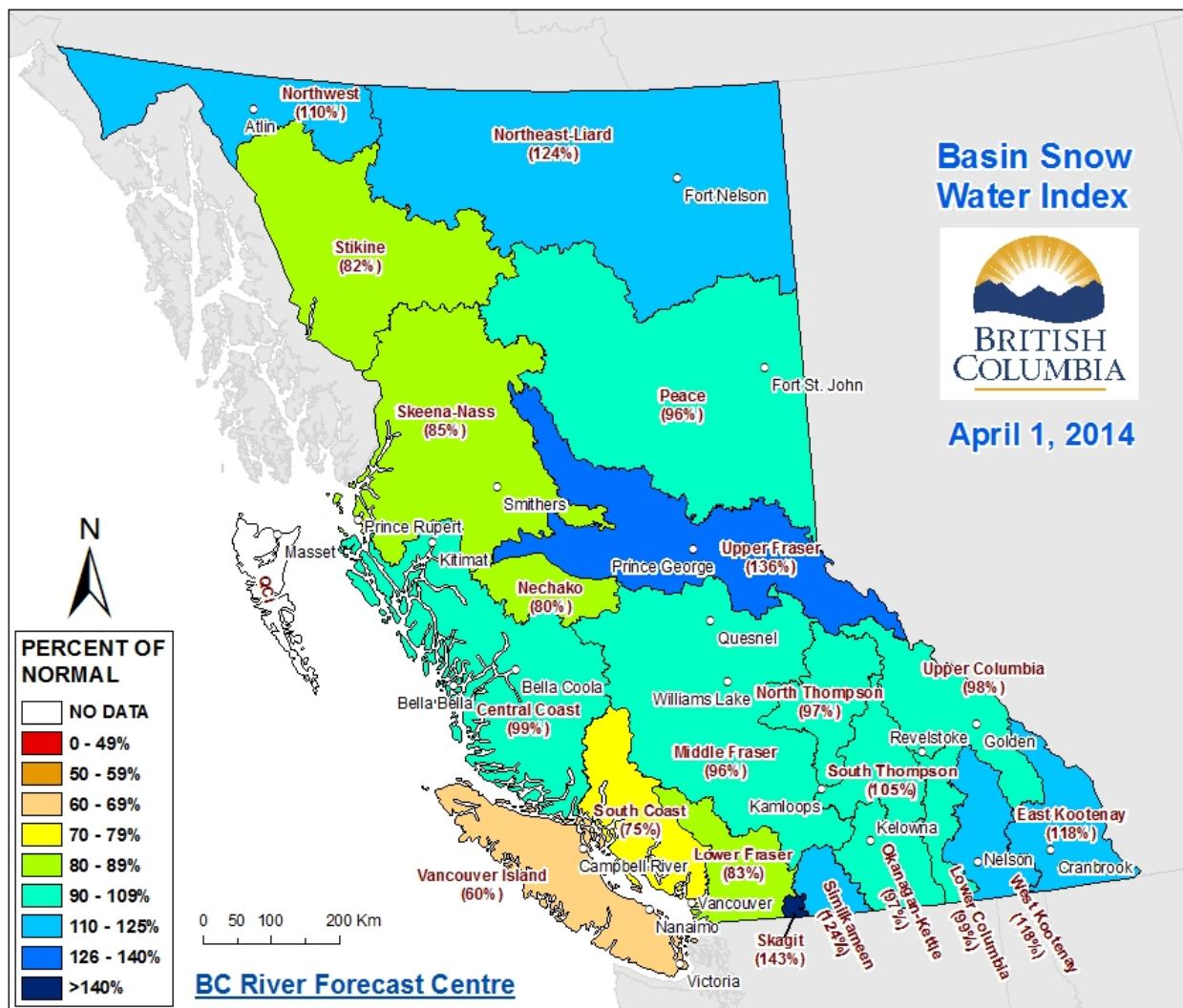


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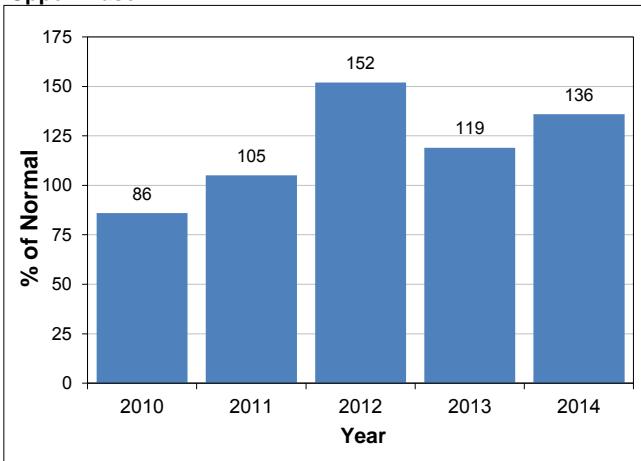
## Snow Survey and Water Supply Bulletin April 1<sup>st</sup>, 2014

Figure 1: Basin Snow Water Index – April 1<sup>st</sup>, 2014

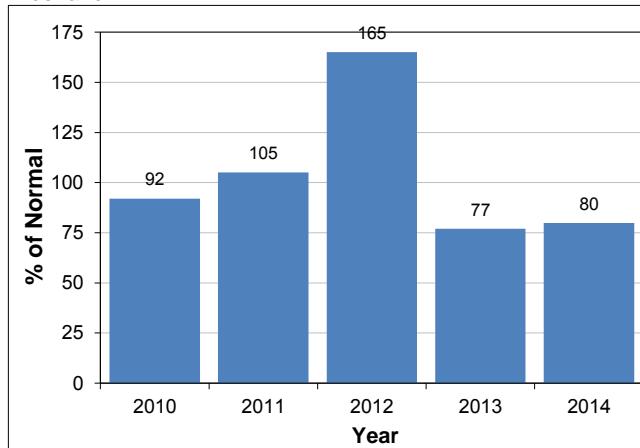


## Snow Basin Index Graphs - April 1, 2014

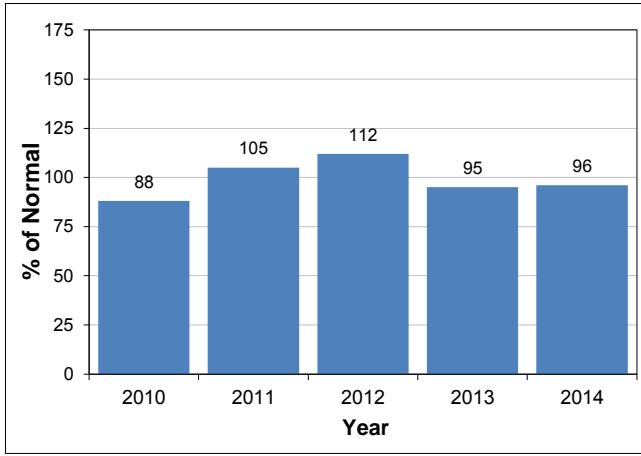
Upper Fraser



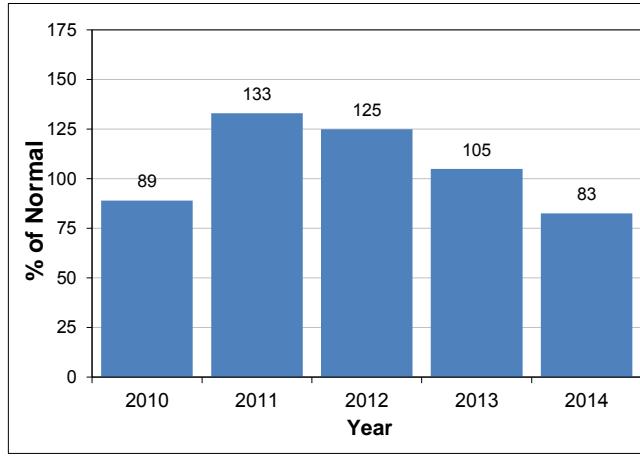
Nechako



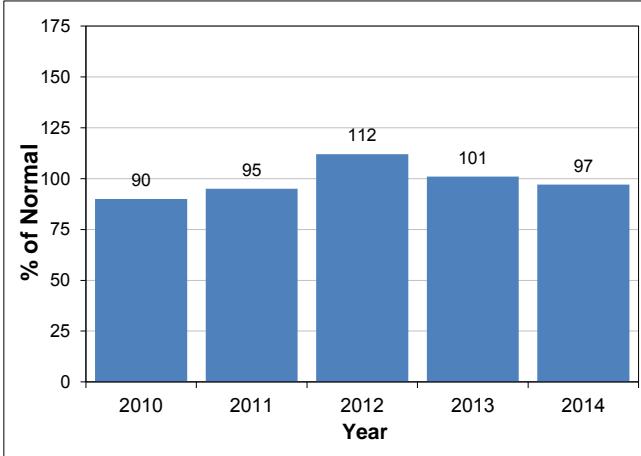
Middle Fraser



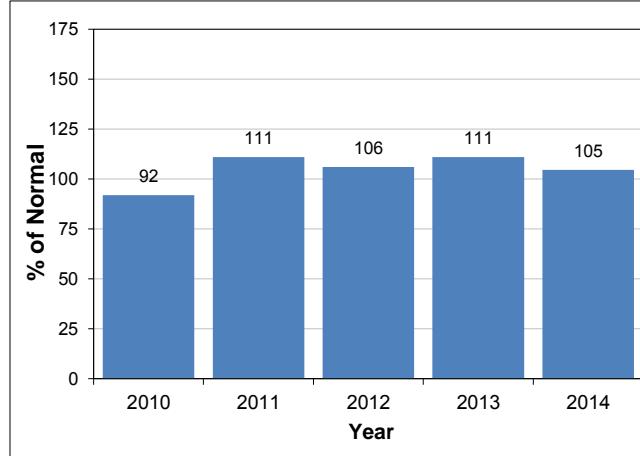
Lower Fraser

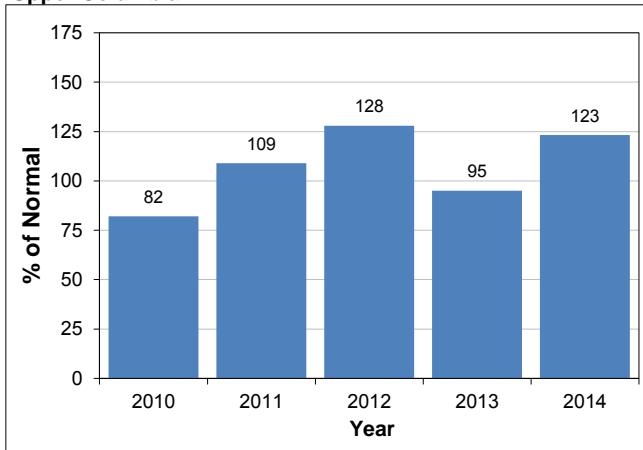
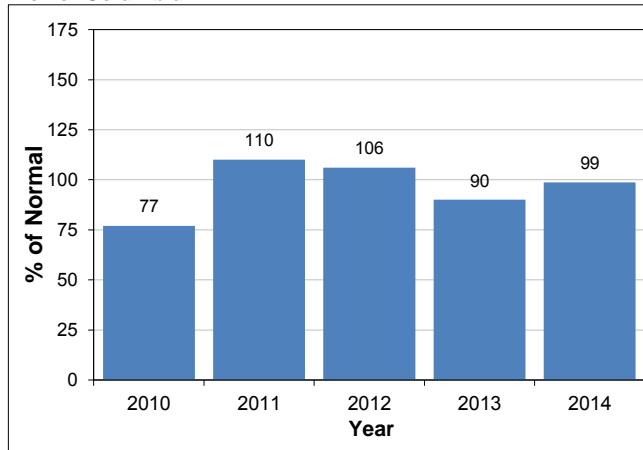
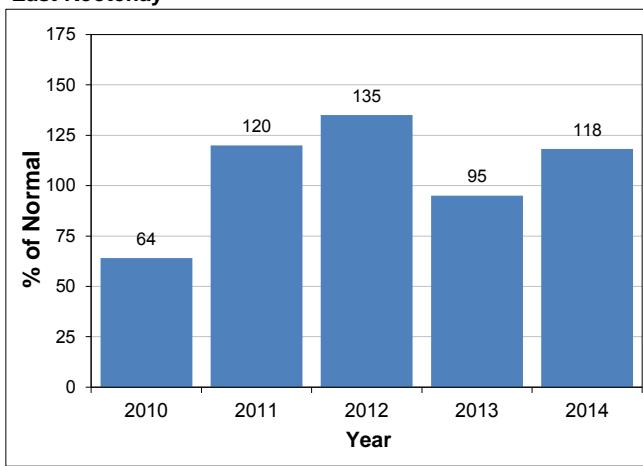
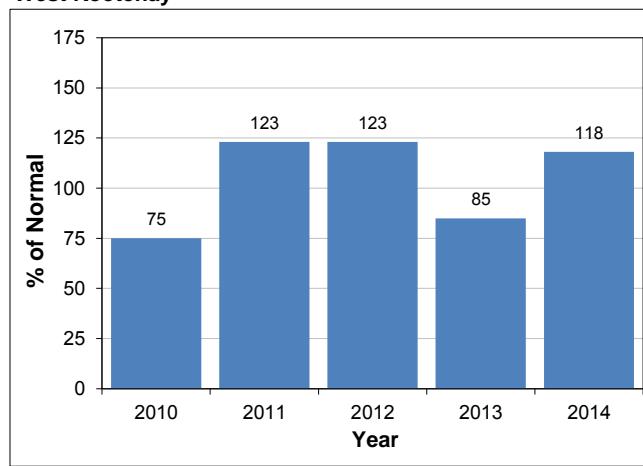
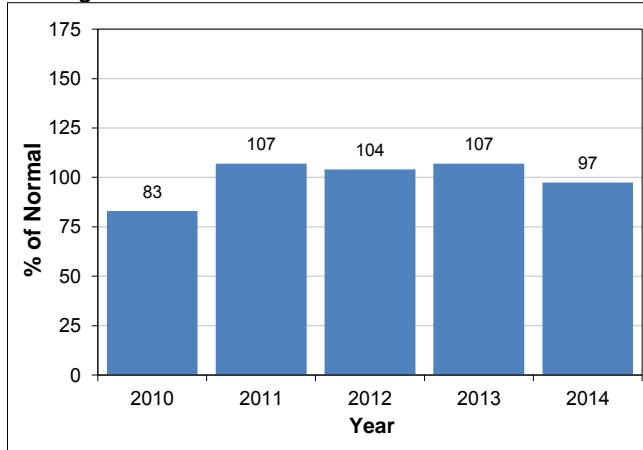
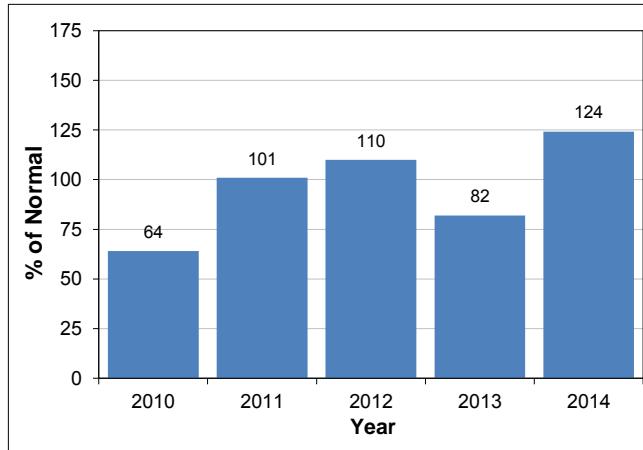


North Thompson

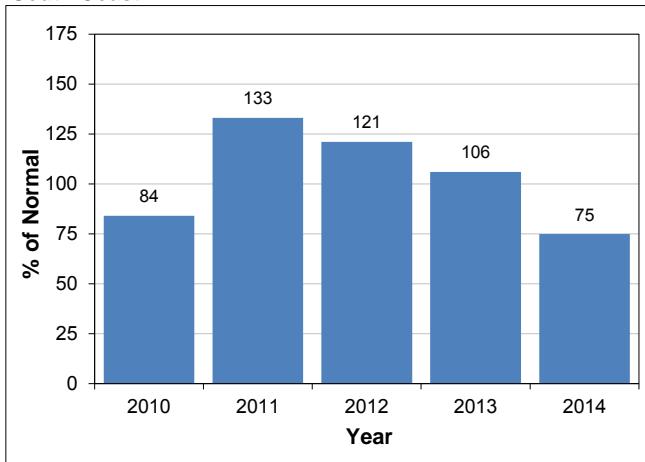


South Thompson

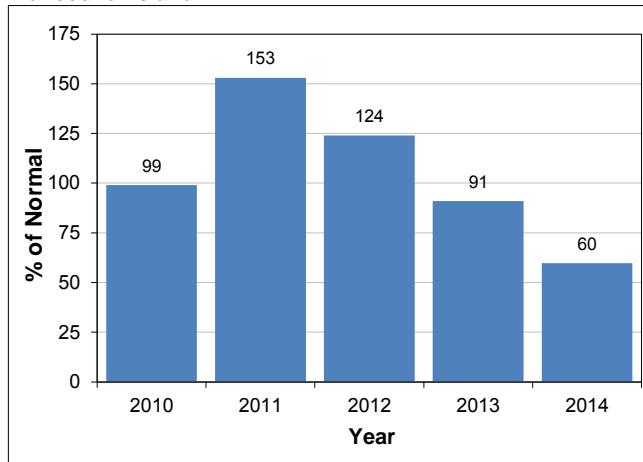


**Upper Columbia****Lower Columbia****East Kootenay****West Kootenay****Okanagan-Kettle****Similkameen**

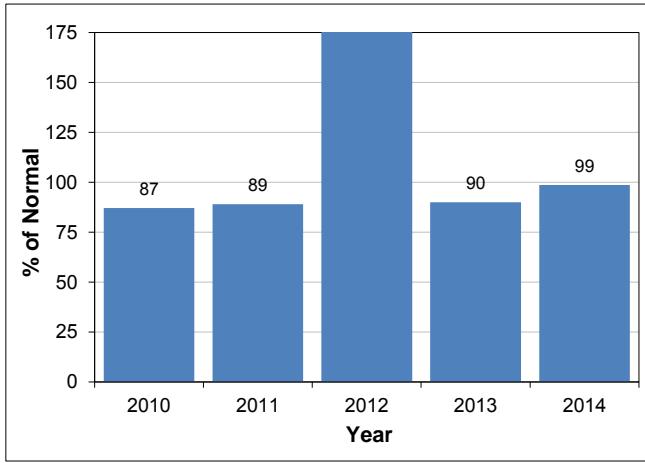
### South Coast



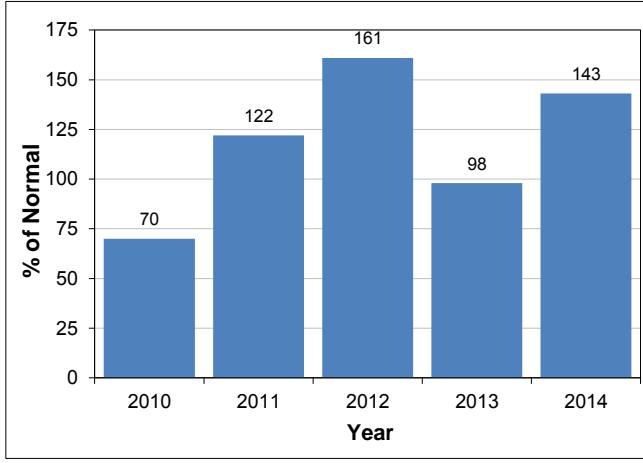
### Vancouver Island



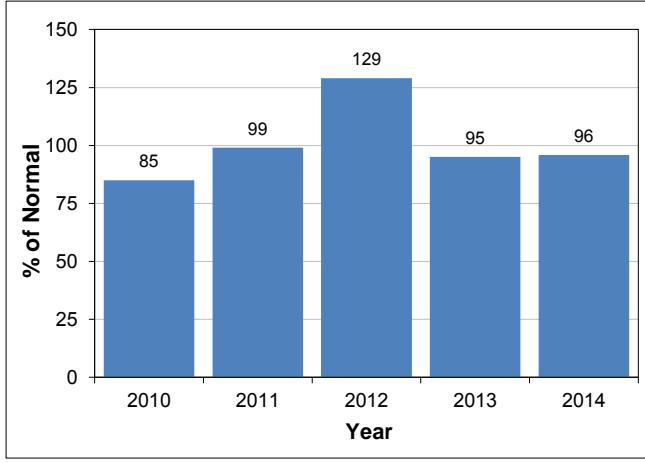
### Central Coast



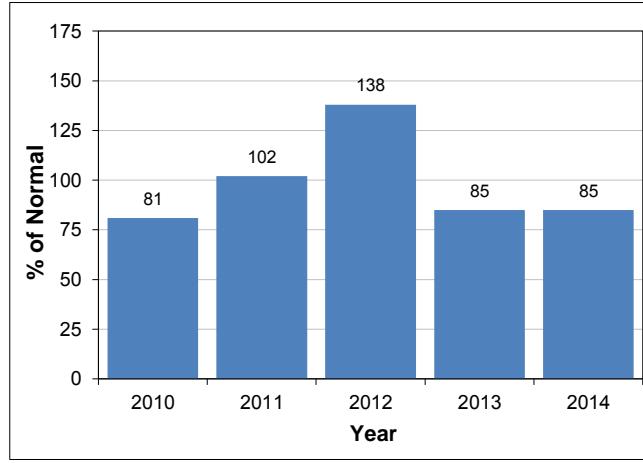
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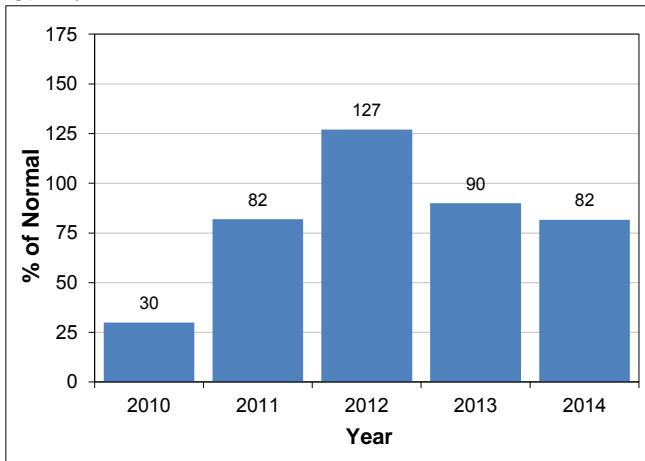
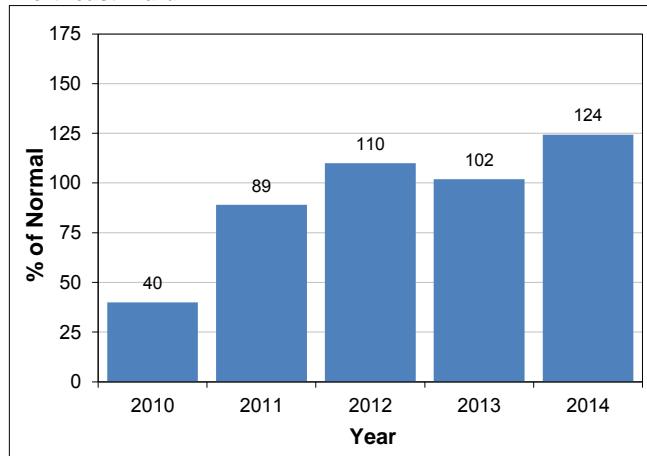


### Peace



### Skeena-Nass



**Stikine****Northeast-Liard**

**Ministry of Forests, Lands and Natural Resource Operations**  
**River Forecast Centre**  
**Volume Runoff Forecast April 2014**

Location	Apr - Jun Runoff				Apr - Jul Runoff				Apr - Sep Runoff				
	Forecast (kdam <sup>3</sup> )	Normal (1981-2010) (kdam <sup>3</sup> )	% of Normal	Std. Error (kdam <sup>3</sup> )	Forecast (kdam <sup>3</sup> )	Normal (1981-2010) (kdam <sup>3</sup> )	% of Normal	Std. Error (kdam <sup>3</sup> )	Forecast (kdam <sup>3</sup> )	Normal (1981-2010) (kdam <sup>3</sup> )	% of Normal	Std. Error (kdam <sup>3</sup> )	
Upper Fraser Basin	Fraser at McBride					3944	3699	107%	307	5527	5166	107%	381
	McGregor at Lower Canyon	4920	3964	124%	428	6095	5010	122%	564				
	Fraser at Shelley	18083	15670	115%	1179	22498	19730	114%	1562				
Middle Fraser Basin	Quesnel River at Quesnel	4729	4541	104%	418					6149	5872	105%	568
Thompson Basin	N. Thompson at McLure	8656	8916	97%	481					10876	11085	98%	753
	S. Thompson at Chase	5636	5792	97%	448					7192	7359	98%	686
	Thompson at Spences Bridge	14946	15114	99%	973					19090	19094	100%	1560
Bulkley and Skeena	Bulkley at Quick	2168	2625	83%	236					2724	3222	85%	272
	Skeena at Usk	16577	18673	89%	1173					20701	23017	90%	1698
Nicola Lake	Inflows	111	121	92%	30	128	138	93%	35				
Nicola River	at Spences Bridge	394	486	81%	82	440	554	79%	101				
Okanagan and Kalamalka-Wood Lake	Okanagan Lake Inflow	418	440	95%	88	436	465	94%	108				
	Kalamalka-Wood Lake Inflow	26.3	28.0	94%	11.3	20.2	29.4	69%	13.2				
Similkameen River	Similkameen at Nighthawk	1450	1273	114%	128					1820	1583	115%	156
	Similkameen at Hedley	1150	989	116%	96					1387	1177	118%	96
Cowichan River	Cowichan Lake Inflows	248	248	100%	57					285	292	97%	57

1 kdam<sup>3</sup>=1,000,000 m<sup>3</sup>

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

2014 Automated Snow Pillow/Manual Snow Survey Data				April					Historic Snow Water Equivalent (mm)						
Station ID	Name	Basin	Elevation (masl)	Survey Date	SD (cm)	SWE (mm)	Code	SWE % 1981-2010 Normal	2013 SWE (mm)	2012 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record	
1A01P	YELLOWHEAD LAKE	Upper Fraser	1847	2014-04-01	164	553		102%	473	724	349	784	541	16	
1A02P	MC BRIDE (UPPER)	Upper Fraser	1608	2014-04-01	182	533		121%	436	681	297	693	442	21	
1A03P	BARKERVILLE	Upper Fraser	1483	2014-04-01	142	420		115%	375	438	221	524	364	38	
1A05	LONGWORTH (UPPER)	Upper Fraser	1693	2014-03-27	311	1274		166%	1220	1150	467	1234	768	55	
1A06A	HANSARD	Upper Fraser	622	2014-03-26	81	257		146%	NS	NS	72	442	176	17	
1A10	PRINCE GEORGE A	Upper Fraser	684	2014-03-27	61	184		188%	175	143	0	313	98	52	
1A11	PACIFIC LAKE	Upper Fraser	756	2014-03-27	236	920		151%	920	1060	290	1060	608	50	
1A12	KAZA LAKE	Upper Fraser	1247	2014-03-28	117	346		101%	346	476	220	476	341	47	
1A14P	HEDRICK LAKE	Upper Fraser	1118	2014-04-01	N/A	1187	E	148%	1177	1287	581	1288	801	13	
1A15	KNUDSEN LAKE	Upper Fraser	1598	2014-03-27	244	1034		129%	941	1264	506	1346	801	46	
1A16	BURNS LAKE	Upper Fraser	820	2014-04-02	53	132		111%	112	162	0	264	119	42	
1A17P	REVOLUTION CREEK	Upper Fraser	1676	2014-04-01	298	1151		147%	960	1292	453	1292	783	28	
1A19P	DOME MOUNTAIN	Upper Fraser	1768	2014-04-01	256	906		124%	825	1062	503	1069	732	7	
1A23	BIRD CREEK	Upper Fraser	1196	2014-03-31	73	184		131%	168	132	84	270	140	24	
1B01	MOUNT WELLS	Nechako	1489	2014-03-31	144	439		90%	409	706	273	690	490	58	
1B01P	MOUNT WELLS	Nechako	1489	2014-04-01	N/A	524		94%	421	792	347	869	557	21	
1B02	TAHTSA LAKE	Nechako	1319	2014-03-31	257	908		76%	920	1972	775	1972	1202	60	
1B02P	TAHTSA LAKE	Nechako	1319	2014-04-01	N/A	956		75%	884	1839	860	2227	1278	21	
1B05	SKINS LAKE	Nechako	877	2014-03-31	30	86		96%	100	92	0	203	90	49	
1B06	MOUNT SWANNELL	Nechako	1596	2014-03-31	105	272		96%	269	273	148	490	282	25	
1B07	NUTLI LAKE	Nechako	1502	2014-03-31	136	410		79%	316	834	301	834	518	23	
1B08P	MOUNT PONDOSY	Nechako	1413	2014-04-01	N/A	504		64%	530	1147	527	1152	790	21	
1C01	BROOKMERE	Middle Fraser	994	2014-03-31	48	156		91%	143	223	51	399	171	68	
1C05	MCGILLIVRAY PASS	Middle Fraser	1715	2014-03-31	138	391		68%	462	793	322	1118	572	60	
1C06	PAVILION	Middle Fraser	1209	NS					0	0	0	147	22	53	
1C08	NAZKO	Middle Fraser	1029	2014-04-03	44	129		280%	23	73	0	142	46	51	
1C09A	HIGHLAND VALLEY	Middle Fraser	1547	2014-03-28	43	103		124%	128	140	3	249	83	46	
1C12P	GREEN MOUNTAIN	Middle Fraser	1766	2014-04-01	N/A	555		63%	619	1057	616	1408	878	19	
1C13A	HORSEFLY MOUNTAIN	Middle Fraser	1612	2014-03-29	176	644		138%	584	502	282	716	466	43	
1C14	BRALORNE	Middle Fraser	1382	2014-03-31	60	163		107%	151	204	0	389	153	47	
1C17	MOUNT TIMOTHY	Middle Fraser	1632	2014-03-26	121	346		117%	364	353	186	533	296	51	
1C18P	MISSION RIDGE	Middle Fraser	1903	2014-04-01	N/A	486		88%	498	709	157	1012	550	43	
1C19	GNAWED MOUNTAIN	Middle Fraser	1617	2014-03-28	55	135		127%	146	195	21	307	106	45	
1C20P	BOSS MOUNTAIN MINE	Middle Fraser	1477	2014-04-01	163	513		88%	595	556	424	866	585	19	
1C21	BIG CREEK	Middle Fraser	1130	2014-04-01	14	48		343%	6	10	0	119	14	41	
1C22	PUNTZI MOUNTAIN	Middle Fraser	939	2014-03-28	11	40		211%	40	0	0	91	19	41	
1C23	PENFOLD CREEK	Middle Fraser	1687	NS					1055	1173	641	1285	979	37	
1C25	LAC LE JEUNE (UPPER)	Middle Fraser	1471	2014-04-01	46	108	A	85%	174	170	43	228	127	41	
1C28	DUFFEY LAKE	Middle Fraser	1253	2014-03-31	147	532		111%	536	646	244	866	480	36	
1C29	SHOVELNOSE MOUNTAIN	Middle Fraser	1456	2014-03-31	81	249		112%	237	337	70	442	222	30	
1C32	DEADMAN RIVER	Middle Fraser	1463	2014-04-01	67	180		173%	120	168	30	196	104	28	
1C33A	GRANITE MOUNTAIN	Middle Fraser	1175	2014-03-26	85	244		130%	205	191	115	272	188	8	
1C37	BRALORNE(UPPER)	Middle Fraser	1980	2014-03-31	150	446		67%	NS	NS	328	1010	665	16	
1C38	DOWNTON LAKE (UPPER)	Middle Fraser	1884	NS					678	NS	422	1416	847	17	
1C39	BRIDGE GLACIER (LOWER)	Middle Fraser	1393	2014-03-31	139	380		66%	468	780	240	1086	580	18	
1C40	TYAUGHTON CREEK (NORTH)	Middle Fraser	1946	2014-03-31	114	296		67%	350	550	264	844	440	18	

2014 Automated Snow Pillow/Manual Snow Survey Data				April					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	2013 SWE (mm)	2012 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record
1C41P	YANKS PEAK, EAST	Middle Fraser	1683	2014-04-01	266	1029		130%	884	932	532	1013	794	16
1C42	CAVERHILL LAKE NEW	Middle Fraser	N/A	2014-03-27	93	240			276	272	174	284	235	9
1D06P	TENQUILLE LAKE	Lower Fraser	1669	2014-04-01	213	728		72%	915	1316	713	1587	1014	12
1D08	STAVE LAKE	Lower Fraser	1211	2014-04-01	296	1220		84%	1615	1985	446	2750	1448	43
1D09	WAHLEACH LAKE	Lower Fraser	1395	2014-04-01	166	625		106%	779	NS	125	1270	588	42
1D09P	WAHLEACH LAKE	Lower Fraser	1408	2014-04-01	N/A	858		84%	985	924	604	1640	1026	21
1D10	NAHATLATCH RIVER	Lower Fraser	1530	2014-04-01	305	1100		85%	1351	NS	523	2410	1296	42
1D16	DICKSON LAKE	Lower Fraser	1147	2014-04-01	332	1420		95%	2106	NS	412	2990	1497	19
1D17P	CHILLIWACK RIVER	Lower Fraser	1621	2014-04-01	439	1981		138%	1825	2348	590	2418	1435	21
1D18P	DISAPPOINTMENT LAKE	Lower Fraser	932	2014-04-01	N/A	1085	E	75%	1576	2065	405	2129	1438	13
1D19P	SPUZZUM CREEK	Lower Fraser	1197	2014-04-01	331	1551		97%	1783	2294	465	2745	1600	14
1E01B	BLUE RIVER	North Thompson	673	2014-03-30	126	417		153%	300	382	154	425	272	31
1E02P	MOUNT COOK	North Thompson	1574	2014-04-01	347	1227		101%	1258	1471	998	1480	1209	13
1E03A	TROPHY MOUNTAIN	North Thompson	1907	2014-03-29	170	597		111%	568	668	332	888	537	36
1E05	KNOUFF LAKE	North Thompson	1189	2014-03-30	52	166		124%	174	176	58	274	134	56
1E07	ADAMS RIVER	North Thompson	1769	2014-03-29	200	690		103%	769	815	435	1069	673	42
1E08P	AZURE RIVER	North Thompson	1625	2014-04-01	253	947		83%	1222	1371	716	1538	1135	16
1E10P	KOSTAL LAKE	North Thompson	1760	2014-04-01	248	855		101%	893	985	618	1169	850	28
1F01A	ABERDEEN LAKE	South Thompson	1262	2014-03-26	60	181		146%	143	153	6	259	124	71
1F02	ANGLEMONT	South Thompson	1168	2014-03-29	116	406		126%	334	324	142	561	321	56
1F03P	PARK MOUNTAIN	South Thompson	1857	2014-04-01	256	908		107%	948	802	549	1207	852	28
1F04	ENDERBY	South Thompson	1948	2014-03-31	306	1142		114%	1171	1115	610	1501	1002	48
1F06P	CELISTA MOUNTAIN	South Thompson	1533	2014-04-01	247	838		97%	935	995	720	1117	867	8
2A01A	CANOE RIVER	Upper Columbia	866	2014-03-26	65	196		302%	NS	192	0	262	65	72
2A02	GLACIER	Upper Columbia	1249	2014-03-27	224	645		96%	660	976	376	1161	670	75
2A03A	FIELD	Upper Columbia	1310	2014-03-31	85	252		184%	71	151	8	251	137	70
2A06P	MOUNT REVELSTOKE	Upper Columbia	1770	2014-04-01	N/A	1192		99%	1223	1439	709	1686	1210	20
2A07	KICKING HORSE	Upper Columbia	1648	2014-03-31	160	386		122%	280	381	185	589	317	62
2A11	BEAVERFOOT	Upper Columbia	1924	2014-04-02	94	278		146%	196	284	105	460	191	50
2A14	MOUNT ABBOT	Upper Columbia	2031	2014-04-05	347	1194		100%	1282	1623	698	1849	1199	50
2A16	GOLDSTREAM	Upper Columbia	1914	2014-04-01	324	1181		104%	1236	1410	785	1638	1133	46
2A17	FIDELITY MOUNTAIN	Upper Columbia	1852	2014-03-26	360	1352		112%	1269	1740	730	1951	1210	49
2A18	KEYSTONE CREEK	Upper Columbia	1839	2014-04-01	210	691		88%	856	1037	485	1388	788	44
2A19	VERMONT CREEK	Upper Columbia	1533	2014-04-02	139	449		113%	425	603	190	843	397	45
2A21P	MOLSON CREEK	Upper Columbia	1930	2014-04-01	N/A	998		97%	1079	1384	651	1551	1029	32
2A22	SUNBEAM LAKE	Upper Columbia	2066	2014-04-01	269	925		105%	983	1216	590	1384	885	44
2A23	BUSH RIVER	Upper Columbia	1982	2014-04-01	232	778		96%	862	NS	455	1331	809	43
2A25	KIRBYVILLE LAKE	Upper Columbia	1739	2014-04-01	306	1123		97%	1324	1360	701	1816	1163	40
2A27	DOWNIE SLIDE (LOWER)	Upper Columbia	964	2014-04-01	228	892		134%	624	858	448	1032	664	35
2A29	DOWNIE SLIDE (UPPER)	Upper Columbia	1628	2014-04-01	365	1372		103%	1332	1570	858	2360	1334	35
2B02A	FARRON	Lower Columbia	1229	2014-03-31	84	275		92%	258	311	162	480	300	41
2B05	WHATSHAN (UPPER)	Lower Columbia	1476	2014-04-01	188	675		106%	524	686	350	964	638	50
2B06	BARNES CREEK	Lower Columbia	1598	2014-04-01	164	558		112%	473	550	299	768	497	52
2B06P	BARNES CREEK	Lower Columbia	1595	2014-04-01	N/A	570		108%	548	566	323	773	530	20
2B07	KOCH CREEK	Lower Columbia	1813	2014-04-01	172	560		78%	748	825	397	1156	722	49
2B08	ST. LEON CREEK	Lower Columbia	1828	2014-04-01	366	1361		113%	1227	1442	818	1831	1200	39
2B08P	ST. LEON CREEK	Lower Columbia	1822	2014-04-01	N/A	1162		108%	1166	1215	581	1553	1072	20
2B09	RECORD MOUNTAIN	Lower Columbia	1906	2014-04-02	176	515		73%	780	805	315	1307	708	36

2014 Automated Snow Pillow/Manual Snow Survey Data				April					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	2013 SWE (mm)	2012 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record	
2C01	SINCLAIR PASS	East Kootenay	1374	2014-03-29	61	144		132%	73	184	36	262	109	74	
2C04	SULLIVAN MINE	East Kootenay	1580	2014-03-27	105	328		121%	242	372	134	538	272	68	
2C07	FERNIE EAST	East Kootenay	1213	2014-04-01	116	412		144%	246	372	123	605	286	61	
2C09Q	MORRISSEY RIDGE	East Kootenay	1966	2014-04-01	N/A	896		127%	595	833	360	1224	704	33	
2C10P	MOYIE MOUNTAIN	East Kootenay	1840	2014-04-01	132	548		133%	351	625	216	679	412	34	
2C11	KIMBERLEY (UPPER) VOR	East Kootenay	2148	NS					NS	582	197	798	407	43	
2C12	KIMBERLEY (MIDDLE) VOR	East Kootenay	1692	NS					NS	448	116	462	237	43	
2C14	FLOE LAKE	East Kootenay	2087	2014-04-02	240	742		101%	899	1027	411	1242	734	40	
2C14P	FLOE LAKE	East Kootenay	2110	2014-04-01	N/A	736		106%	757	994	364	983	695	20	
2C15	MOUNT ASSINIBOINE	East Kootenay	2230	2014-04-02	181	540		105%	592	NS	252	816	514	40	
2C16	MOUNT JOFFRE	East Kootenay	1763	2014-04-02	167	487		140%	428	533	179	711	349	40	
2C17	THUNDER CREEK	East Kootenay	2062	2014-04-02	127	374		144%	377	452	140	475	259	40	
2C20	VERMILLION RIVER NO. 3	East Kootenay	1612	NS					NS	NS	175	401	264	16	
2D02	FERGUSON	West Kootenay	929	2014-04-04	150	583		106%	498	620	142	881	550	70	
2D03	SANDON	West Kootenay	1072	2014-04-01	100	379		115%	249	NS	71	585	330	69	
2D04	NELSON	West Kootenay	952	2014-04-03	78	276		83%	210	393	137	622	334	75	
2D05	GRAY CREEK (LOWER)	West Kootenay	1558	2014-04-01	167	556		126%	413	645	290	688	440	63	
2D06	CHAR CREEK	West Kootenay	1290	2014-04-01	150	526		100%	445	620	273	940	525	47	
2D07A	DUNCAN LAKE NO. 2	West Kootenay	662	2014-03-30	52	172		207%	0	132	0	223	83	23	
2D08P	EAST CREEK	West Kootenay	2004	2014-04-01	N/A	913		106%	971	1009	442	1245	863	32	
2D09	MOUNT TEMPLEMAN	West Kootenay	1879	NS					1086	NS	688	1608	1013	35	
2D10	GRAY CREEK (UPPER)	West Kootenay	1926	2014-04-01	239	817		113%	785	1048	492	1123	722	42	
2D14P	REDFISH CREEK	West Kootenay	2086	2014-04-01	350	1270		107%	1377	1755	994	1755	1188	11	
2E01	MONASHEE PASS	Kettle	1387	2014-04-01	115	377		116%	291	375	188	517	324	59	
2E02	CARMI	Kettle	1254	2014-03-27	40	83		72%	72	134	14	290	115	51	
2E03	BIG WHITE MOUNTAIN	Kettle	1672	2014-03-26	145	438		92%	450	478	332	762	476	48	
2E06	BLUEJOINT MOUNTAIN	Kettle	1990	NS					736	692	329	1175	706	31	
2E07P	GRANO CREEK	Kettle	1874	2014-04-01	133	472	E	91%	482	549	334	791	516	15	
2F01	TROUT CREEK	Okanagan	1428	2014-03-26	87	254		158%	206	248	52	396	161	68	
2F01A	TROUT CREEK (WEST)	Okanagan	1430	2014-03-26	74	218		111%	210	272	210	272	196	3	
2F02	SUMMERLAND RESERVOIR	Okanagan	1304	2014-03-27	95	280		142%	224	239	96	389	197	72	
2F03	MC CULLOCH	Okanagan	1266	2014-03-28	53	170		129%	165	189	38	249	132	75	
2F04	GRAYSTOKE LAKE	Okanagan	1818	NS					NS	430	196	828	339	40	
2F05P	MISSION CREEK	Okanagan	1794	2014-04-01	157	555		116%	546	549	276	728	478	43	
2F07	POSTILL LAKE	Okanagan	1358	2014-03-31	72	219		108%	190	241	109	348	202	63	
2F08	GRAYBACK RESERVOIR	Okanagan	1548	2014-03-28	93	254		114%	253	298	114	351	223	60	
2F09	WHITEROCKS MOUNTAIN	Okanagan	1789	2014-03-26	140	448		86%	601	563	318	1021	521	60	
2F10	SILVER STAR MOUNTAIN	Okanagan	1834	2014-03-30	208	747		103%	854	740	414	1115	723	55	
2F11	ISINTOK LAKE	Okanagan	1651	2014-03-26	79	162		109%	176	200	66	340	148	46	
2F12	MOUNT KOBAU	Okanagan	1817	2014-03-29	79	204		67%	496	312	105	602	304	48	
2F13	ESPERON CR (UPPER)	Okanagan	1634	2014-03-26	108	328		86%	410	384	244	805	383	42	
2F14	ESPERON CR (MIDDLE)	Okanagan	1440	2014-03-26	94	252		77%	342	296	196	607	328	43	
2F18	BRENDA MINE	Okanagan	1453	2014-03-27	99	278		100%	253	295	159	531	277	43	
2F18P	BRENDA MINE	Okanagan	1453	2014-04-01	N/A	326		94%	274	340	201	497	345	20	
2F19	OYAMA LAKE	Okanagan	1365	2014-03-31	65	172		112%	136	174	61	255	154	41	
2F20	VASEUX CREEK	Okanagan	1403	2014-03-29	71	178		135%	104	118	40	239	132	42	
2F21	BOULEAU LAKE	Okanagan	1405	2014-03-29	91	206		67%	324	246	192	564	306	39	
2F23	MACDONALD LAKE	Okanagan	1742	2014-03-27	123	355		83%	428	380	257	677	428	34	

2014 Automated Snow Pillow/Manual Snow Survey Data				April				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	2013 SWE (mm)	2012 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record	
2F24	ISLAHT LAKE	Okanagan	1492	NS				259	227	165	501	309	31		
2F25	POSTILL LAKE (UPPER)	Okanagan	1500	2014-03-31	83	228		231	274	170	274	N/A	4		
2G03P	BLACKWALL PEAK	Similkameen	1934	2014-04-01	267	943		122%	712	1135	403	1497	770	45	
2G04	LOST HORSE MOUNTAIN	Similkameen	1988	2014-04-01	103	290		134%	248	243	138	533	216	49	
2G05	MISSEZULA MOUNTAIN	Similkameen	1602	2014-04-01	96	292		148%	166	246	90	361	197	48	
2G06	HAMILTON HILL	Similkameen	1477	2014-03-31	97	310		107%	213	367	83	851	291	54	
3A01	GROUSE MOUNTAIN	South Coast	1126	2014-04-01	199	830		72%	1650	1590	44	2670	1160	72	
3A02	POWL RIVER (UPPER)	South Coast	1002	2014-03-31	203	802		83%	888	NS	511	1813	969	31	
3A05	POWL RIVER (LOWER)	South Coast	882	2014-03-31	145	587		90%	1138	NS	85	1554	651	32	
3A09	PALISADE LAKE	South Coast	898	2014-04-01	178	820		62%	1610	1857	285	3560	1322	55	
3A10	DOG MOUNTAIN	South Coast	1007	2014-04-01	175	720		63%	1540	1525	51	2720	1137	63	
3A19	ORCHID LAKE	South Coast	1178	2014-03-31	347	1340		76%	1953	2495	748	3770	1769	34	
3A20	CALLAGHAN CREEK	South Coast	1009	2014-03-31	177	712		87%	882	1128	192	1604	820	35	
3A22P	NOSTETUKO RIVER	South Coast	1457	2014-04-01	66	403		71%	428	829	233	1074	568	24	
3A24P	UPPER MOSLEY CREEK	South Coast	1655	2014-04-01	83	216		75%	161	331	147	567	288	24	
3A25P	SQUAMISH RIVER (UPPER)	South Coast	1387	2014-04-01	329	1164		73%	1574	1973	803	2760	1584	23	
3B01	FORBIDDEN PLATEAU	Vancouver Island	1110	2014-03-27	221	798		54%	1529	2188	387	3550	1485	59	
3B02A	MT. COKEY	Vancouver Island	1267	2014-03-28	135	546		66%	1086	NS	331	2100	831	31	
3B04	ELK RIVER	Vancouver Island	270	2014-03-27	0	0		0%	0	0	0	607	34	49	
3B10	UPPER THELWOOD LAKE	Vancouver Island	1014	2014-03-27	210	892		61%	1634	2158	354	3200	1455	53	
3B13	HEATHER MOUNTAIN	Vancouver Island	1170	2014-04-02	125	538		66%	NS	NS	170	1892	818	25	
3B17P	WOLF RIVER	Vancouver Island	1422	2014-04-01	N/A	867		66%	1220	1627	305	2600	1320	31	
3B18	WOLF RIVER (MIDDLE)	Vancouver Island	1050	2014-03-27	94	332		54%	640	828	0	1706	618	41	
3B19	WOLF RIVER (LOWER)	Vancouver Island	615	2014-03-27	60	232		74%	326	650	0	1198	315	41	
3B23P	JUMP CREEK	Vancouver Island	1134	2014-04-01	176	785		72%	1267	1708	184	3040	1088	17	
3B24	HEATHER MOUNTAIN UPPER	Vancouver Island	N/A	2014-04-02	234	916			NS	NS	N/A	N/A	N/A	N/A	
3C07	WEDEENE RIVER SOUTH	North Coast	196	NS					482	981	96	981	383	26	
3C08P	BURNT BRIDGE CREEK	North Coast	1329	2014-04-01	210	791		99%	725	1390	427	1402	802	15	
3D01C	SUMALLO RIVER WEST	Skagit	801	2014-04-01	82	329		172%	239	461	0	461	191	20	
3D02	LIGHTNING LAKE	Skagit	1254	2014-03-26	98	306		110%	276	445	60	622	278	63	
3D03A	KLESIKWA	Skagit	1134	2014-04-01	83	339		147%	303	416	0	792	231	61	
4A02	PINE PASS	Peace	1439	2014-03-27	296	1197		99%	1179	1731	668	1731	1204	51	
4A02P	PINE PASS	Peace	1386	2014-04-01	N/A	1040		101%	965	1487	844	1550	1026	24	
4A03	WARE (UPPER)	Peace	1563	2014-03-29	86	213		83%	266	235	157	390	258	42	
4A04	WARE (LOWER)	Peace	969	2014-03-29	79	211		109%	190	215	118	316	194	41	
4A05	GERMANSEN (UPPER)	Peace	1489	2014-03-28	106	297		85%	326	488	261	523	348	46	
4A06	TUTIZZI LAKE	Peace	1043	2014-03-28	93	232		90%	231	349	166	406	259	49	
4A07	LADY LAURIER LAKE	Peace		2014-03-29	151	474		90%	414	694	384	854	529	47	
4A09	PULPIT LAKE	Peace	1331	2014-03-29	134	422		99%	439	516	297	618	425	49	
4A09P	PULPIT LAKE	Peace	1331	2014-04-01	N/A	393		90%	438	527	344	620	439	23	
4A10	FREDRICKSON LAKE	Peace	1323	2014-03-28	97	279		113%	221	259	163	351	247	49	
4A11	TRYGVE LAKE	Peace	1409	2014-03-28	105	300		81%	328	452	257	511	370	49	
4A12	TSAYDAYCHI LAKE	Peace	1173	2014-03-28	120	354		89%	363	575	277	639	398	47	
4A13	PHILIP LAKE	Peace	1013	2014-03-28	88	221		79%	322	357	176	449	279	47	
4A16	MORFEE MOUNTAIN	Peace	1427	2014-03-27	230	949		114%	863	1003	555	1158	833	46	
4A18	MOUNT SHEBA	Peace	1480	2014-03-27	251	1014		123%	1010	1181	495	1294	823	44	
4A20	MONKMAN CREEK	Peace	1566	2014-03-27	173	659		122%	717	796	313	1067	540	33	
4A21	MOUNT STEARNS	Peace	1514	2014-03-29	55	115		78%	151	110	59	239	147	36	

2014 Automated Snow Pillow/Manual Snow Survey Data				April					Historic Snow Water Equivalent (mm)						
Station ID	Name	Basin	Elevation (masl)	Survey Date YYYY-MM-DD	SD (cm)	SWE (mm)		SWE % 1981-2010 Normal	2013 SWE (mm)	2012 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record	
4A25	FORT ST. JOHN AIRPORT	Peace	692	2014-04-01	63	166		171%	154	70	0	226	97	39	
4A27P	KWADACHA RIVER	Peace	1695	2014-04-01	N/A	316	E	96%	298	330	236	446	328	16	
4A30P	AIKEN LAKE	Peace	1061	2014-04-01	N/A	251		94%	201	328	197	371	268	28	
4B01	KIDPRICE LAKE	Skeena	1415	2014-03-31	203	692		74%	694	1781	622	1781	931	58	
4B02	JOHANSON LAKE	Skeena	1480	2014-03-28	101	283		94%	272	341	173	417	301	49	
4B03A	HUDSON BAY MTN	Skeena	1452	2014-03-31	146	470		94%	392	651	356	846	499	42	
4B04	CHAPMAN LAKE	Skeena	1485	2014-03-31	127	396		87%	404	672	315	762	457	48	
4B06	TACHEK CREEK	Skeena	1133	2014-03-28	86	230		103%	242	328	112	362	223	45	
4B07	MCKENDRICK CREEK	Skeena	1048	2014-03-31	102	306		113%	265	362	183	427	271	45	
4B08	MOUNT CRONIN	Skeena	1491	2014-03-31	137	415		73%	512	743	433	1097	570	45	
4B10	NINGUNSAW PASS	Nass	647	2014-03-30	109	320		74%	324	554	231	730	434	39	
4B11A	BEAR PASS	Nass	437	NS					544	771	330	1013	642	29	
4B12P	GRANDUC MINE	Skeena	790	2014-04-01	N/A	826		48%	1060	1800	1061	2213	1728	10	
4B13A	TERRACE AIRPORT	Skeena	219	2014-03-31	23	76		90%	13	309	0	333	84	33	
4B14	EQUITY MINE	Skeena	1434	2014-03-28	128	338		88%	332	556	258	640	385	37	
4B15	LU LAKE	Skeena	1296	2014-03-28	107	256		88%	272	456	162	504	291	37	
4B15P	LU LAKE	Skeena	1308	2014-04-01	105	301		114%	263	383	154	478	264	15	
4B16P	SHEDIN CREEK	Skeena	1320	2014-04-01	199	561		63%	684	1096	660	1096	896	17	
4B17P	TSAI CREEK	Skeena	1369	2014-04-01	209	802		69%	936	1754	929	1825	1165	15	
4B18P	CEDAR - KITEEN	Skeena	912	2014-04-01	174	778		109%	530	1042	349	1126	712	12	
4C01	SIKANNI LAKE	Liard	1390	2014-03-29	103	293		106%	231	294	194	380	276	48	
4C02	SUMMIT LAKE	Liard	1291	2014-04-01	59	155		137%	75	54	0	240	113	45	
4C03	DEASE LAKE	Liard	805	2014-03-27	80	188		142%	160	67	50	259	132	48	
4C05	FORT NELSON A	Liard	368	2014-04-01	39	96		102%	108	58	23	198	94	47	
4C15	JADE CITY	Liard	943	2014-03-27	98	286		120%	238	254	162	340	238	12	
4D01	TELEGRAPH CREEK	Stikine	490	NS					121	NS	37	343	146	37	
4D02	ISKUT	Stikine	931	2014-03-27	42	110		112%	94	106	0	180	98	39	
4E02B	ATLIN LAKE	Yukon		2014-04-01	50	125			104	NS	76	243	N/A	9	

Code	Description
A	Sampling problems were encountered
ASP	Automated Snow Pillow
B	Early or late sample
C	Combination of A and B
E	Estimate
MSS	Manual Snow Survey
N/A	Not Available
N	Scheduled, but not measured
NS	Not Sampled
SD	Snow Depth
SWE	Snow Water Equivalent
T	Trace Amount



## Snow Survey and Water Supply Bulletin May 1<sup>st</sup>, 2014

The May 1<sup>st</sup> snow survey is now complete. Data from 128 snow courses and 51 snow pillows around the province and out-of-province sampling locations, and climate data from Environment Canada form the basis for the following report<sup>1</sup>.

### Weather

April saw mixed weather across the province, with shifts between periods of unsettled conditions and drier spells which were warmer in the south and west, and colder in the north and east (influenced by arctic air). Cool and unsettled weather dominated the last 1-2 weeks of the month.

Temperatures through April were generally 0.5-2 °C below normal in the Interior and North-East, 0.5-1 °C above normal on the South Coast and Vancouver Island, and variable through the South Interior, Kootenay and Columbia.

As the result of the dominant wet pattern at the end of the month most regions of the province experienced above normal precipitation through April. Well above normal precipitation occurred in the North, North-East, North Coast, South Interior and areas of the Okanagan. Below normal precipitation was observed in the Cariboo/Chilcotin and in the Similkameen.

### Snowpack

The combination of cooler and unsettled weather at the end of April has led to a delay in the onset of the snow melt season and increased snow water equivalents in many regions.

May 1<sup>st</sup> Snow Basin Indices increased from April 1<sup>st</sup> values in all areas of the province except the South Coast, West Kootenay and Skagit. Snow Basin Indices are well above normal (>120%) in the Upper Fraser, Okanagan-Kettle, East Kootenay, Similkameen, Skagit and Liard basins. In the East Kootenay, Similkameen, Skagit and Liard basins, elevated May 1<sup>st</sup> snow basin indices are largely the result of the delay in the snow melt season rather than significant growth in the snow pack since the April 1<sup>st</sup> survey. Increases from April's Snow Basin Indices in other watersheds are the result of delayed snow melt and increased snow packs. The Liard snow index is slightly higher than 2013 while the Upper Fraser snow index is slightly higher than 2013 but lower than 2012 (see Appendix below). Snow Basin Indices are below normal (<90%) in the Nechako, South Coast, Central Coast and on Vancouver Island. Near-normal to moderately elevated (90-120%) snow basin indices are present in remaining regions of the province. The entire Fraser Basin Index (i.e. upstream from the Fraser Valley) is currently at 105% of the long-term average.

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.



## Snow Survey and Water Supply Bulletin May 1<sup>st</sup>, 2014

Table 1 - BC Snow Basin Indices – May 1, 2014

Basin	% of Normal	Basin	% of Normal
Upper Fraser	142	Okanagan-Kettle	128
Nechako	81	Similkameen	172
Middle Fraser	107	South Coast	80
Lower Fraser	87	Vancouver Island	65
North Thompson	102	Central Coast	68
South Thompson	114	Skagit	148
Fraser River – All Basins	105	Peace	107
Upper Columbia	106	Skeena-Nass	108
Lower Columbia	104	Stikine	108
East Kootenay	135	Liard	249 <sup>1</sup>
West Kootenay	118	Northwest	69

<sup>1</sup> The official Liard index is based on only 2 measurements which, at this time of year, can result in skewed data. The index provided here incorporates other sites in an attempt to get better representation for the watershed. Anecdotal observations suggest that some areas of the Liard have near normal snow packs.

### Outlook

With a slight delay in the onset of the melt season and small increases in the size of the snow pack in some regions, seasonal flood risk is moderately elevated in the South Thompson, West Kootenay, and Okanagan-Kettle basins. Seasonal flood risk is high in the Upper Fraser, East Kootenay, Similkameen and Liard basins. Elsewhere in the province, including the entire Fraser River basin, seasonal flood risk is considered normal. Caution should be used in interpreting flood risk from May 1<sup>st</sup> Snow Basin Indices, as very high values can be the result of delayed snow melt, rather than unusually large overall snow water equivalents. This is particularly the case in the Similkameen and Liard basins.

Weather during the snow melt season is a critical factor in determining if flooding will occur. Adverse weather, including extended periods of heat or high intensity or prolonged precipitation, can result in flooding in years with normal, or even below normal snow packs. Across most of the province, warm weather in early May has led to ripening of the snow at mid-to-high elevations. As a result, most basins are now in the melt season where adverse weather conditions could pose a flood risk. This seasonal risk is expected to continue through late-June or into early-July depending on the rate at which snow melt occurs.

Below normal seasonal runoff during the spring melt is expected in the south-west (Vancouver Island and South Coast, Central Coast and Lower Fraser) due to low snow packs (65-80%). Spring and summer weather conditions will be the key factor in determining whether or not drought and low flows will occur during summer and early fall.

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.



## Snow Survey and Water Supply Bulletin May 1<sup>st</sup>, 2014

Seasonal volume runoff forecasts (in Appendix below) have higher than normal runoff (112-136%) forecasted in the Upper Fraser, Nicola Lake, Okanagan and Similkameen basins, and near normal or slightly below normal runoff (85-111%) forecasted in the Middle Fraser, Thompson, Skeena and Cowichan basins. Actual seasonal volume runoff can vary greatly depending on spring and summer weather conditions. Note that the forecast for the Cowichan River is based on a scenario of 'normal' summer weather.

Current medium-range forecasts from the North American Ensemble Forecast System indicate a high likelihood of above normal temperatures through the May 15-22 period. Similarly, the current extended forecast is for warmer weather, particularly in south and south-west BC starting next week (May 13<sup>th</sup>). If warmer weather occurs into the middle of May, increased snow melt and a period of higher river levels can be expected.

Seasonal weather forecasts from Environment Canada indicate an increased chance of above normal temperatures for the May to July 2014 period through most of British Columbia, with the highest likelihood of above normal temperatures on Vancouver Island and south-west BC.

The River Forecast Centre will continue to monitor snow pack conditions and will provide an updated seasonal water supply and flood risk assessment in the May 15<sup>th</sup> 2014 Snow Bulletin, scheduled for release on May 23<sup>rd</sup>, 2014.

Produced by: BC River Forecast Centre  
May 8, 2014

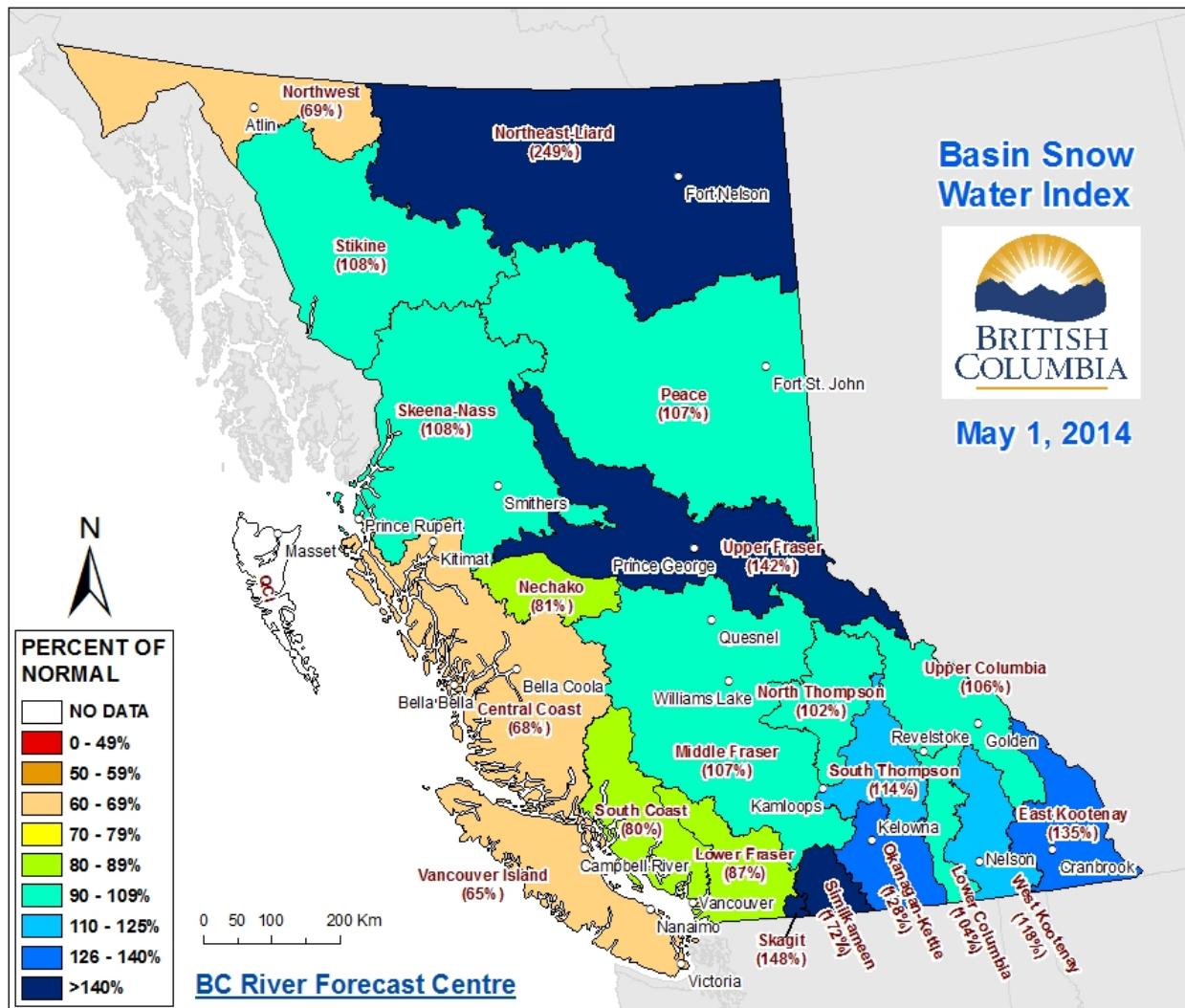


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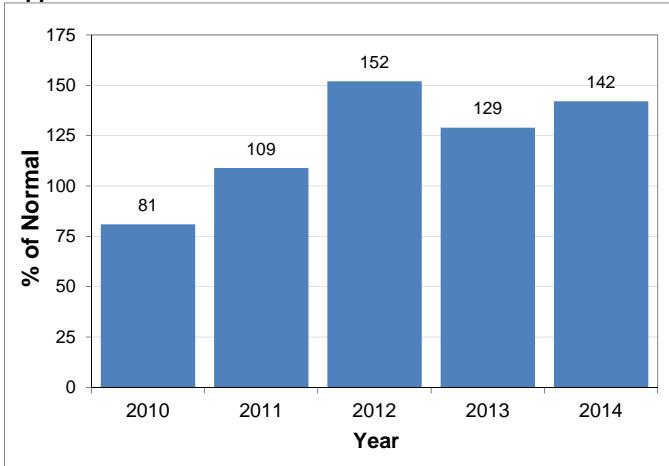
## Snow Survey and Water Supply Bulletin May 1<sup>st</sup>, 2014

Figure 1: Basin Snow Water Index – May 1<sup>st</sup>, 2014

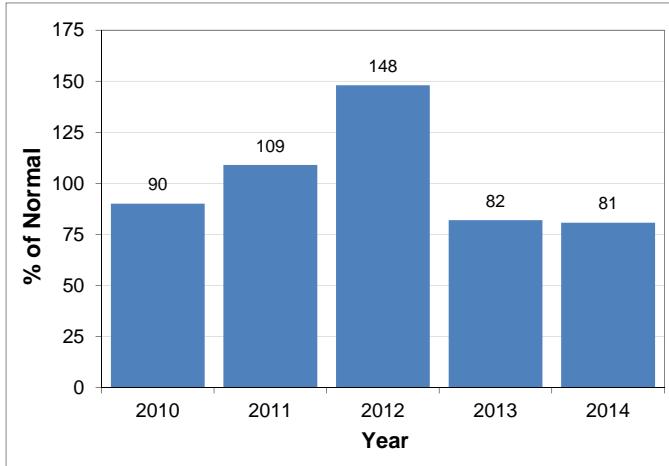


## Snow Basin Index Graphs - May 1, 2014

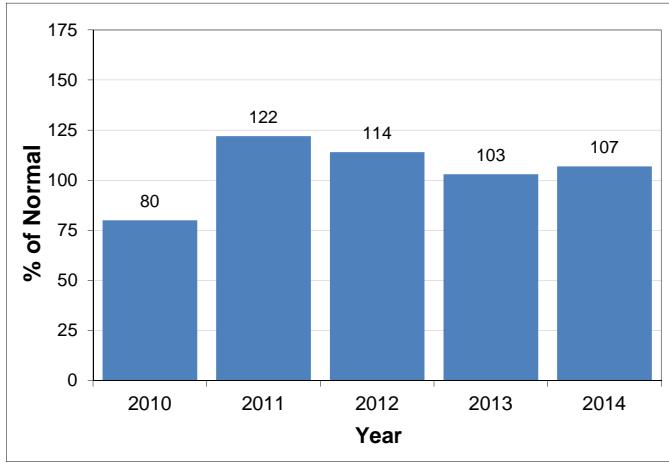
**Upper Fraser**



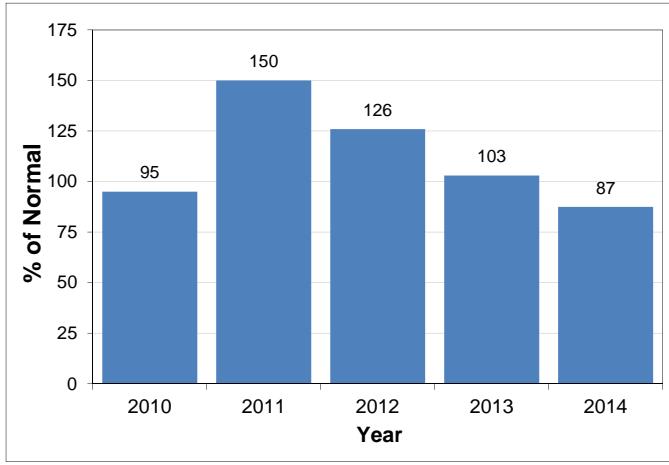
**Nechako**



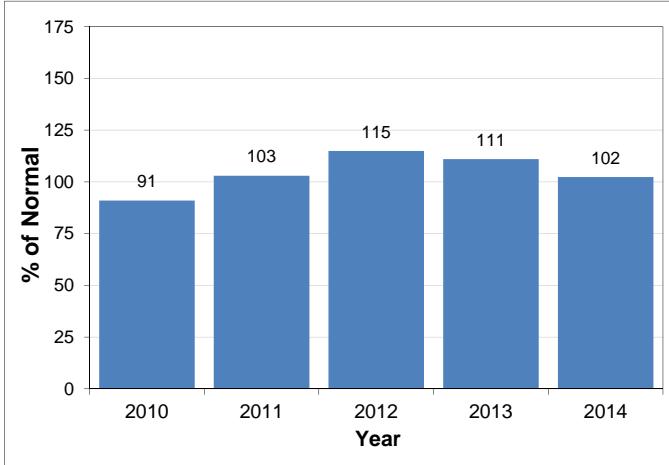
**Middle Fraser**



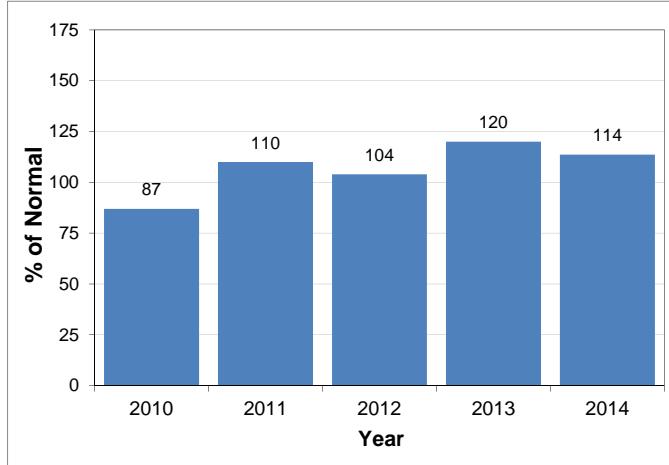
**Lower Fraser**



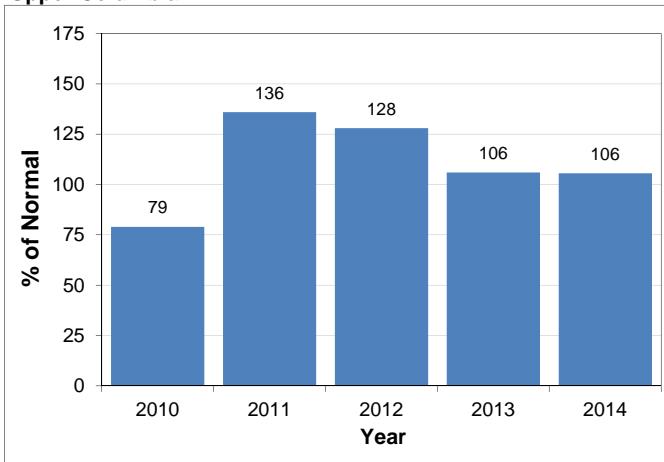
**North Thompson**



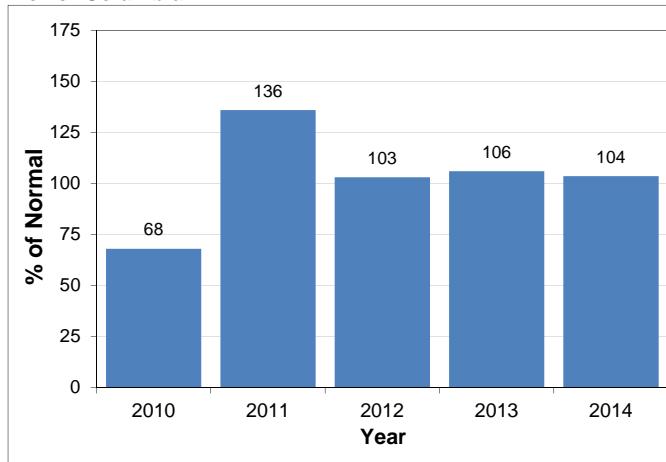
**South Thompson**



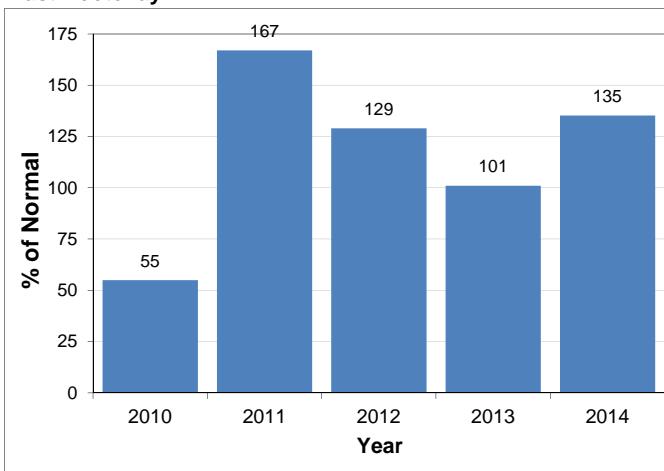
#### Upper Columbia



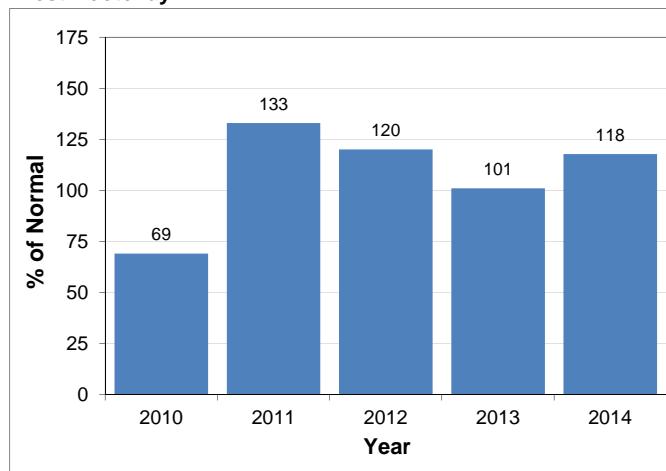
#### Lower Columbia



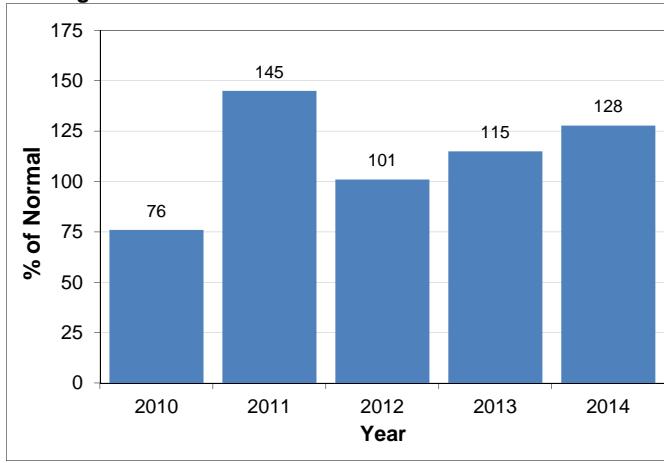
#### East Kootenay



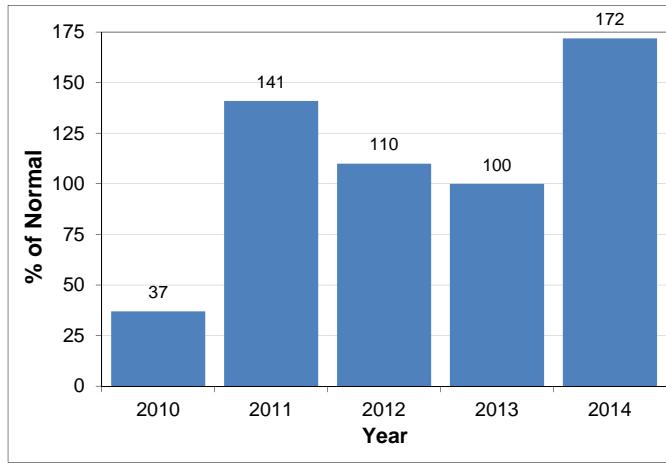
#### West Kootenay



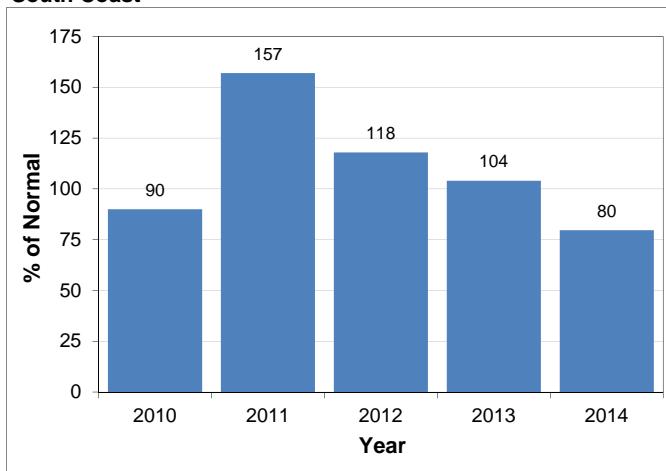
#### Okanagan-Kettle



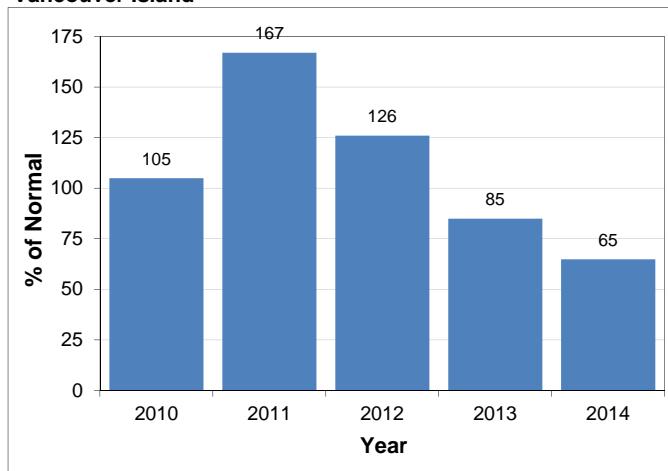
#### Similkameen



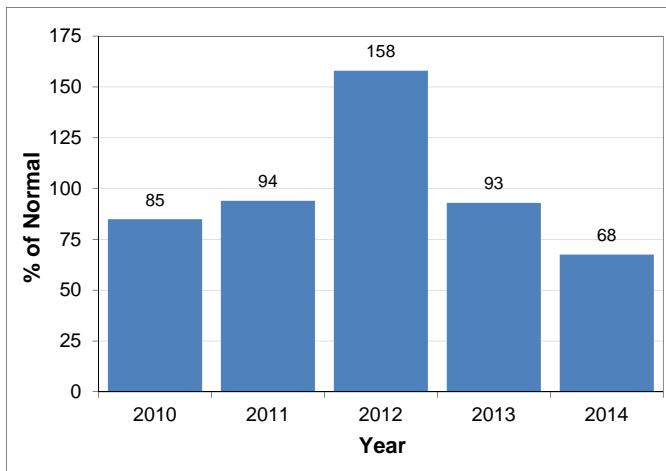
### South Coast



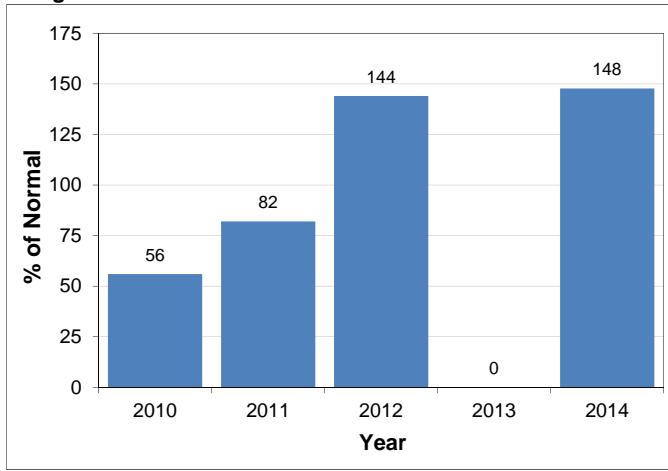
### Vancouver Island



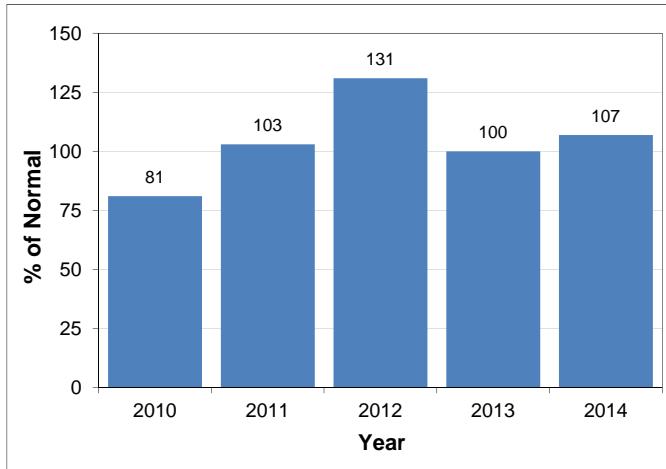
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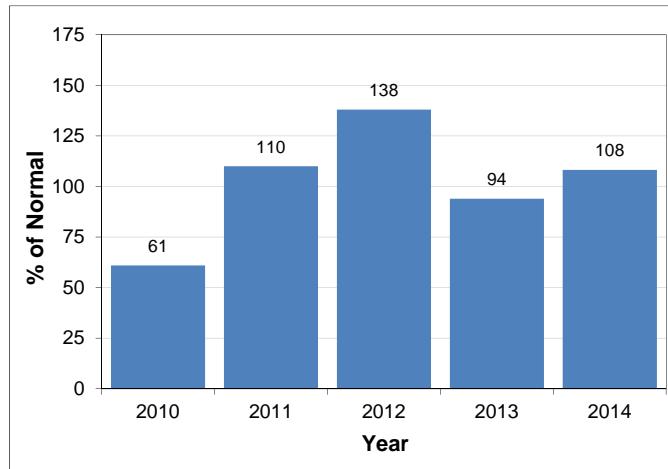
### Skagit

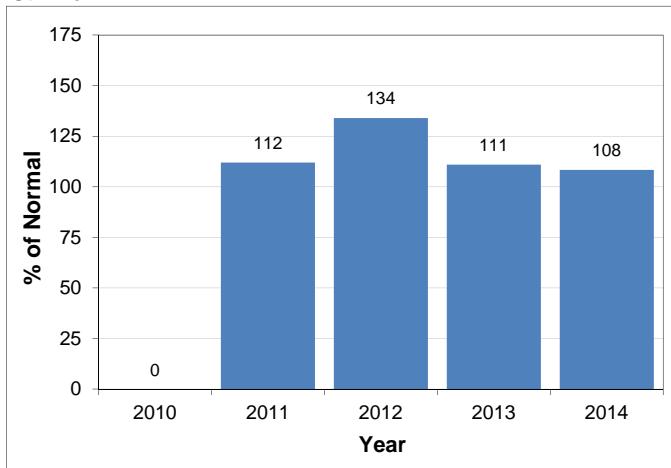
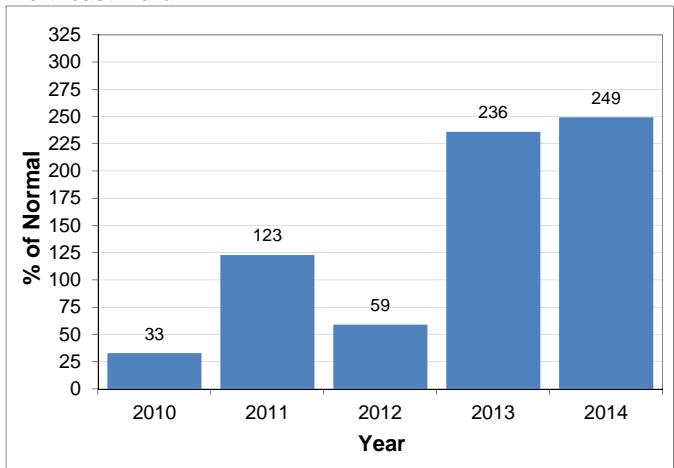


### Peace



### Skeena-Nass



**Stikine****Northeast-Liard**

**Ministry of Forests, Lands and Natural Resource Operations**  
**River Forecast Centre**  
**Volume Runoff Forecast May 2014**

<b>Location</b>	<b>May - Jun Runoff</b>				<b>May - Jul Runoff</b>				<b>May - Sep Runoff</b>			
	Forecast (kdam <sup>3</sup> )	Normal (1981-2010) (kdam <sup>3</sup> )	% of Normal	Std. Error (kdam <sup>3</sup> )	Forecast (kdam <sup>3</sup> )	Normal (1981-2010) (kdam <sup>3</sup> )	% of Normal	Std. Error (kdam <sup>3</sup> )	Forecast (kdam <sup>3</sup> )	Normal (1981-2010) (kdam <sup>3</sup> )	% of Normal	Std. Error (kdam <sup>3</sup> )
Upper Fraser Basin	Fraser at McBride				3511	3534	99%	297	4998	5000	100%	373
	McGregor at Lower Canyon				4834	3552	136%	376	6023	4598	131%	563
	Fraser at Shelley				17392	13672	127%	1070	19776	17732	112%	1657
Middle Fraser Basin	Quesnel River at Quesnel				4551	4117	111%	396	6032	5448	111%	574
Thompson Basin	N. Thompson at McLure				8390	8209	102%	425	10715	10379	103%	785
	S. Thompson at Chase				5344	5298	101%	403	6963	6865	101%	659
	Thompson at Spences Bridge				14195	13923	102%	825	18447	17903	103%	1510
Bulkley and Skeena	Bulkley at Quick				2278	2383	96%	185	2875	2980	97%	220
	Skeena at Usk				16866	17317	97%	964	21241	21661	98%	1463
Nicola Lake	Inflows	117	105	112%	28	143	122	117%	33			
Nicola River	at Spences Bridge	350	409	86%	76	404	476	85%	98			
Okanagan and Kalamalka-Wood Lake	Okanagan Lake Inflow	460	349	132%	81	505	376	134%	103			
	Kalamalka-Wood Lake Inflow	24.2	19.0	128%	8.2	26.7	20.4	131%	10.7			
Similkameen River	Similkameen at Nighthawk	1362	1101	124%	152				1783	1411	126%	193
	Similkameen at Hedley	959	827	116%	91				1193	1015	117%	105
Cowichan River	Cowichan Lake Inflows	126	130	98%	45				163	174	94%	45

1 kdam<sup>3</sup>=1,000,000 m<sup>3</sup>

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

2014 Automated Snow Pillow/Manual Snow Survey Data				May 1st					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	2013 SWE (mm)	2012 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record	
1A01P	YELLOWHEAD LAKE	Upper Fraser	1847	2014-05-01	138	606		107%	571	801	364	833	565	16	
1A02P	MC BRIDE (UPPER)	Upper Fraser	1608	2014-05-01	153	611		132%	532	708	239	749	462	21	
1A03P	BARKERVILLE	Upper Fraser	1483	2014-05-01	119	473		137%	388	382	165	604	346	38	
1A05	LONGWORTH (UPPER)	Upper Fraser	1693	2014-04-28	305	1252		151%	1370	1188	391	1370	830	59	
1A06A	HANSARD	Upper Fraser	622	2014-04-26	31	100			NS	NS	#N/A	#N/A	#N/A	0	
1A10	PRINCE GEORGE A	Upper Fraser	684	NS					NS	NS	0	216	10	40	
1A11	PACIFIC LAKE	Upper Fraser	756	2014-04-28	190	840		166%	NS	976	93	976	507	47	
1A12	KAZA LAKE	Upper Fraser	1247	2014-04-29	111	411		125%	363	481	166	481	328	48	
1A14P	HEDRICK LAKE	Upper Fraser	1118	2014-05-01	255	1438	E	175%	1268	1241	585	1279	820	13	
1A15	KNUDSEN LAKE	Upper Fraser	1598	2014-04-28	253	1114		128%	1076	1272	501	1346	868	46	
1A16	BURNS LAKE	Upper Fraser	820	2014-04-30	3	6		23%	26	12	0	148	26	36	
1A17P	REVOLUTION CREEK	Upper Fraser	1676	2014-05-01	314	1353		168%	1094	1352	486	1349	804	28	
1A19P	DOME MOUNTAIN	Upper Fraser	1768	2014-05-01	262	1068		132%	944	1145	570	1163	810	7	
1A23	BIRD CREEK	Upper Fraser	1196	NS					0	80	0	204	39	23	
1B01	MOUNT WELLS	Nechako	1489	NS					471	739	201	958	487	56	
1B01P	MOUNT WELLS	Nechako	1489	2014-05-01	N/A	602		106%	504	817	311	919	569	21	
1B02	TAHTSA LAKE	Nechako	1319	NS					957	1854	701	2073	1256	59	
1B02P	TAHTSA LAKE	Nechako	1319	2014-05-01	N/A	1017		75%	969	1943	826	2348	1362	21	
1B05	SKINS LAKE	Nechako	877	NS					0	0	0	100	3	43	
1B06	MOUNT SWANNELL	Nechako	1596	NS					303	312	109	499	287	23	
1B07	NUTLI LAKE	Nechako	1502	NS					294	817	250	870	513	22	
1B08P	MOUNT PONDOSY	Nechako	1413	2014-05-01	N/A	489		62%	539	1175	399	1277	794	21	
1C01	BROOKMERE	Middle Fraser	994	2014-04-30	13	42		65%	66	121	0	419	65	67	
1C05	MCGILLIVRAY PASS	Middle Fraser	1715	2014-04-28	111	381		66%	488	742	270	1118	573	61	
1C06	PAVILION	Middle Fraser	1209	NS					0	NS	0	0	0	14	
1C08	NAZKO	Middle Fraser	1029	NS					NS	0	0	46	3	24	
1C09A	HIGHLAND VALLEY	Middle Fraser	1547	NS					NS	0	0	142	20	47	
1C12P	GREEN MOUNTAIN	Middle Fraser	1766	2014-05-01	N/A	628		69%	691	1124	579	1373	909	19	
1C13A	HORSEFLY MOUNTAIN	Middle Fraser	1612	2014-04-28	172	690		169%	650	470	136	676	408	43	
1C14	BRALORNE	Middle Fraser	1382	2014-04-28	34	98		169%	84	87	0	255	58	50	
1C17	MOUNT TIMOTHY	Middle Fraser	1632	2014-05-02	96	351		137%	299	338	118	536	257	51	
1C18P	MISSION RIDGE	Middle Fraser	1903	2014-05-01	N/A	447		90%	584	701	147	1028	496	43	
1C19	GNAWED MOUNTAIN	Middle Fraser	1617	NS					NS	44	0	241	54	45	
1C20P	BOSS MOUNTAIN MINE	Middle Fraser	1477	2014-05-01	137	565		95%	638	534	394	821	597	19	
1C21	BIG CREEK	Middle Fraser	1130	2014-04-26	0	0		0%	NS	NS	0	48	12	4	
1C22	PUNTZI MOUNTAIN	Middle Fraser	939	NS					NS	NS	0	0	0	10	
1C23	PENFOLD CREEK	Middle Fraser	1687	2014-05-01	252	1103		104%	1170	1292	710	1420	1064	40	
1C25	LAC LE JEUNE (UPPER)	Middle Fraser	1471	2014-04-30	26	95		317%	74	36	0	168	30	41	
1C28	DUFFEY LAKE	Middle Fraser	1253	NS					NS	NS	206	624	377	13	
1C29	SHOVELNOSE MOUNTAIN	Middle Fraser	1456	2014-05-05	22	84		102%	85	NS	0	305	82	33	
1C32	DEADMAN RIVER	Middle Fraser	1463	2014-05-02	0	0		0%	60	0	0	194	32	28	
1C33A	GRANITE MOUNTAIN	Middle Fraser	1175	2014-05-01	29	110		124%	114	37	0	221	89	8	
1C37	BRALORNE(UPPER)	Middle Fraser	1980	2014-04-28	144	496		73%	572	926	364	1092	676	18	
1C38	DOWNTON LAKE (UPPER)	Middle Fraser	1884	2014-04-28	161	554		65%	726	1018	450	1340	856	17	
1C39	BRIDGE GLACIER (LOWER)	Middle Fraser	1393	2014-04-28	119	392		65%	470	768	244	1018	600	18	
1C40	TYAUGHTON CREEK (NORTH)	Middle Fraser	1946	2014-04-28	99	304		69%	396	496	268	806	443	18	

2014 Automated Snow Pillow/Manual Snow Survey Data				May 1st					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	2013 SWE (mm)	2012 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record	
1C41P	YANKS PEAK, EAST	Middle Fraser	1683	2014-05-01	254	1192		144%	1027	991	548	1058	825	16	
1C42	CAVERHILL LAKE NEW	Middle Fraser	N/A	NS					NS	NS	172	172	N/A	1	
1D06P	TENQUILLE LAKE	Lower Fraser	1669	2014-05-01	222	801		77%	985	1434	653	1705	1047	12	
1D08	STAVE LAKE	Lower Fraser	1211	2014-04-30	271	1291		85%	1631	1932	574	3120	1513	45	
1D09	WAHLEACH LAKE	Lower Fraser	1395	2014-04-30	170	709		115%	801	913	177	1417	615	44	
1D09P	WAHLEACH LAKE	Lower Fraser	1408	2014-05-01	N/A	1009		97%	1090	1109	509	1757	1043	21	
1D10	NAHATLATCH RIVER	Lower Fraser	1530	2014-04-30	266	1225		90%	1570	NS	608	2720	1361	42	
1D16	DICKSON LAKE	Lower Fraser	1147	2014-04-30	315	1516		98%	2132	2114	520	3180	1553	23	
1D17P	CHILLIWACK RIVER	Lower Fraser	1621	2014-05-01	440	2245		148%	1911	2461	720	2436	1513	21	
1D18P	DISAPPOINTMENT LAKE	Lower Fraser	932	2014-05-01	N/A	1192	E	83%	1447	1924	375	2460	1437	13	
1D19P	SPUZZUM CREEK	Lower Fraser	1197	2014-05-01	304	1613		99%	1859	2302	401	2930	1635	14	
1E01B	BLUE RIVER	North Thompson	673	2014-04-26	48	233		803%	133	206	0	265	29	29	
1E02P	MOUNT COOK	North Thompson	1574	2014-05-01	303	1389		103%	1462	1617	998	1665	1346	13	
1E03A	TROPHY MOUNTAIN	North Thompson	1907	2014-04-26	191	685		113%	710	912	417	960	607	37	
1E05	KNOUFF LAKE	North Thompson	1189	NS					NS	NS	0	142	45	9	
1E07	ADAMS RIVER	North Thompson	1769	2014-04-26	206	778		107%	843	839	396	1173	726	40	
1E08P	AZURE RIVER	North Thompson	1625	2014-05-01	218	1122		92%	1389	1501	773	1635	1214	16	
1E10P	KOSTAL LAKE	North Thompson	1760	2014-05-01	247	952		107%	1041	1030	641	1268	891	28	
1F01A	ABERDEEN LAKE	South Thompson	1262	NS					88	0	0	165	19	57	
1F02	ANGLEMONT	South Thompson	1168	NS					176	208	0	496	160	53	
1F03P	PARK MOUNTAIN	South Thompson	1857	2014-05-01	282	1158		121%	1118	920	570	1343	955	28	
1F04	ENDERBY	South Thompson	1948	NS					1381	NS	700	1430	1079	50	
1F06P	CELISTA MOUNTAIN	South Thompson	1533	2014-05-01	233	1030		113%	1096	1147	746	1187	914	8	
2A01A	CANOE RIVER	Upper Columbia	866	NS					NS	NS	0	147	5	24	
2A02	GLACIER	Upper Columbia	1249	2014-04-27	175	809		126%	653	945	320	1247	643	68	
2A03A	FIELD	Upper Columbia	1310	2014-04-30	27	110		550%	NS	NS	0	178	20	48	
2A06P	MOUNT REVELSTOKE	Upper Columbia	1770	2014-05-01	N/A	1268		100%	1402	1503	874	1625	1265	20	
2A07	KICKING HORSE	Upper Columbia	1648	2014-04-30	124	469		158%	270	328	63	589	296	63	
2A11	BEAVERFOOT	Upper Columbia	1924	2014-04-30	81	270		159%	162	242	58	495	170	51	
2A14	MOUNT ABBOT	Upper Columbia	2031	2014-04-25	338	1366		102%	1384	1885	853	1885	1345	48	
2A16	GOLDSTREAM	Upper Columbia	1914	2014-05-01	318	1331		111%	1358	1535	850	1781	1200	50	
2A17	FIDELITY MOUNTAIN	Upper Columbia	1852	2014-04-26	344	1522		117%	1399	1853	817	1986	1306	50	
2A18	KEYSTONE CREEK	Upper Columbia	1839	NS					911	1119	514	1421	823	46	
2A19	VERMONT CREEK	Upper Columbia	1533	2014-04-30	102	383		117%	392	479	140	1026	327	47	
2A21P	MOLSON CREEK	Upper Columbia	1930	2014-05-01	N/A	1104		100%	1268	1628	645	1678	1100	32	
2A22	SUNBEAM LAKE	Upper Columbia	2066	2014-05-01	250	999		106%	1022	1285	611	1562	939	45	
2A23	BUSH RIVER	Upper Columbia	1982	2014-05-01	210	834		100%	928	1142	492	1392	834	44	
2A25	KIRBYVILLE LAKE	Upper Columbia	1739	2014-05-01	318	1331		107%	1498	1439	865	1797	1243	41	
2A27	DOWNIE SLIDE (LOWER)	Upper Columbia	964	2014-05-01	152	682		132%	568	780	0	910	517	36	
2A29	DOWNIE SLIDE (UPPER)	Upper Columbia	1628	2014-05-01	306	1344		96%	1598	1788	802	2242	1402	35	
2B02A	FARRON	Lower Columbia	1229	2014-04-29	41	158		86%	135	206	23	406	183	41	
2B05	WHATSHAN (UPPER)	Lower Columbia	1476	2014-05-01	157	707		127%	558	578	255	983	557	53	
2B06	BARNES CREEK	Lower Columbia	1598	2014-05-01	147	616		131%	617	473	211	742	470	53	
2B06P	BARNES CREEK	Lower Columbia	1595	2014-05-01	N/A	681		126%	693	593	360	821	541	20	
2B07	KOCH CREEK	Lower Columbia	1813	2014-05-01	176	685		88%	906	797	391	1201	778	53	
2B08	ST. LEON CREEK	Lower Columbia	1828	2014-05-01	344	1447		114%	1304	1443	816	1974	1267	47	
2B08P	ST. LEON CREEK	Lower Columbia	1822	2014-05-01	N/A	1345		121%	1299	1290	701	1501	1113	20	
2B09	RECORD MOUNTAIN	Lower Columbia	1906	2014-05-03	149	455		63%	865	780	157	1278	727	39	

2014 Automated Snow Pillow/Manual Snow Survey Data				May 1st					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	2013 SWE (mm)	2012 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record
2C01	SINCLAIR PASS	East Kootenay	1374	2014-04-29	31	98		265%	0	68	0	246	37	67
2C04	SULLIVAN MINE	East Kootenay	1580	2014-04-27	97	304		167%	220	320	0	518	182	68
2C07	FERNIE EAST	East Kootenay	1213	2014-04-29	67	257		189%	81	149	0	541	136	59
2C09Q	MORRISSEY RIDGE	East Kootenay	1966	2014-05-01	N/A	949		142%	600	915	317	1332	670	33
2C10P	MOYIE MOUNTAIN	East Kootenay	1840	2014-05-01	106	544		161%	355	495	18	689	338	34
2C11	KIMBERLEY (UPPER) VOR	East Kootenay	2148	NS					NS	669	188	935	434	44
2C12	KIMBERLEY (MIDDLE) VOR	East Kootenay	1692	NS					NS	258	0	483	156	44
2C14	FLOE LAKE	East Kootenay	2087	2014-04-30	242	897		112%	971	1182	497	1369	800	43
2C14P	FLOE LAKE	East Kootenay	2110	2014-05-01	N/A	868		113%	872	1196	491	1188	767	20
2C15	MOUNT ASSINIBOINE	East Kootenay	2230	2014-04-30	177	607		107%	639	767	339	930	566	43
2C16	MOUNT JOFFRE	East Kootenay	1763	2014-04-30	140	491		142%	450	493	180	772	346	44
2C17	THUNDER CREEK	East Kootenay	2062	NS					379	411	163	556	271	42
2C20	VERMILLION RIVER NO. 3	East Kootenay	1612	NS					NS	NS	71	422	196	15
2D02	FERGUSON	West Kootenay	929	NS					385	580	160	773	429	68
2D03	SANDON	West Kootenay	1072	2014-05-01	19	79		176%	31	NS	0	399	45	59
2D04	NELSON	West Kootenay	952	2014-04-28	17	66		46%	4	NS	0	508	143	57
2D05	GRAY CREEK (LOWER)	West Kootenay	1558	2014-04-29	157	592		138%	449	684	229	726	429	64
2D06	CHAR CREEK	West Kootenay	1290	2014-05-01	126	488		109%	424	536	79	838	449	46
2D07A	DUNCAN LAKE NO. 2	West Kootenay	662	NS					NS	NS	0	42	14	4
2D08P	EAST CREEK	West Kootenay	2004	2014-05-01	N/A	1167		128%	976	923	480	1346	910	32
2D09	MOUNT TEMPLEMAN	West Kootenay	1879	2014-04-30	292	1182		110%	1166	1268	731	1679	1075	45
2D10	GRAY CREEK (UPPER)	West Kootenay	1926	2014-04-29	244	922		120%	923	NS	505	1300	767	43
2D14P	REDFISH CREEK	West Kootenay	2086	2014-05-01	340	1496		115%	1628	1875	1035	1863	1298	11
2E01	MONASHEE PASS	Kettle	1387	2014-05-01	100	393		148%	258	305	67	505	266	54
2E02	CARMI	Kettle	1254	2014-04-29	0	0		0%	0	0	0	173	12	50
2E03	BIG WHITE MOUNTAIN	Kettle	1672	2014-04-29	149	516		114%	514	474	237	762	451	48
2E06	BLUEJOINT MOUNTAIN	Kettle	1990	NS					NS	NS	287	1201	725	33
2E07P	GRANO CREEK	Kettle	1874	2014-05-01	142	614	E	109%	557	680	420	814	561	15
2F01	TROUT CREEK	Okanagan	1428	2014-04-29	50	168		300%	116	141	0	386	56	66
2F01A	TROUT CREEK (WEST)	Okanagan	1430	2014-04-29	55	207		185%	124	171	112	292	112	4
2F02	SUMMERLAND RESERVOIR	Okanagan	1304	2014-05-05	0	0		0%	30	129	0	368	129	48
2F03	MC CULLOCH	Okanagan	1266	2014-05-02	0	0		0%	0	NS	0	188	12	66
2F04	GRAYSTOKE LAKE	Okanagan	1818	NS					NS	NS	120	940	343	40
2F05P	MISSION CREEK	Okanagan	1794	2014-05-01	175	716		149%	631	588	141	784	481	43
2F07	POSTILL LAKE	Okanagan	1358	2014-05-01	53	176		145%	150	NS	0	282	121	61
2F08	GRAYBACK RESERVOIR	Okanagan	1548	2014-04-25	88	282		178%	206	NS	0	386	158	41
2F09	WHITEROCKS MOUNTAIN	Okanagan	1789	2014-04-29	138	508		108%	633	511	175	1013	470	43
2F10	SILVER STAR MOUNTAIN	Okanagan	1834	2014-04-30	222	875		119%	983	783	371	1135	734	54
2F11	ISINTOK LAKE	Okanagan	1651	2014-04-30	61	190		194%	146	150	0	437	98	48
2F12	MOUNT KOBAU	Okanagan	1817	2014-04-27	80	226		73%	509	287	53	597	309	48
2F13	ESPERON CR (UPPER)	Okanagan	1634	2014-04-29	103	364		105%	430	366	119	805	346	44
2F14	ESPERON CR (MIDDLE)	Okanagan	1440	NS					NS	NS	0	551	216	30
2F18	BRENDA MINE	Okanagan	1453	2014-04-30	63	246		125%	216	234	0	526	197	45
2F18P	BRENDA MINE	Okanagan	1453	2014-05-01	N/A	177		138%	178	185	0	342	128	20
2F19	OYAMA LAKE	Okanagan	1365	2014-04-29	34	233		424%	44	64	0	185	55	43
2F20	VASEUX CREEK	Okanagan	1403	2014-04-26	50	195		476%	0	0	0	192	41	42
2F21	BOULEAU LAKE	Okanagan	1405	2014-04-28	75	238		95%	322	200	40	488	251	41
2F23	MACDONALD LAKE	Okanagan	1742	2014-04-30	119	421		100%	412	404	198	650	421	33

2014 Automated Snow Pillow/Manual Snow Survey Data				May 1st					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	2013 SWE (mm)	2012 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record	
2F24	ISLAHT LAKE	Okanagan	1492	NS				364	217		64	433	234	32	
2F25	POSTILL LAKE (UPPER)	Okanagan	1500	NS				NS	NS		71	71	N/A	2	
2G03P	BLACKWALL PEAK	Similkameen	1934	2014-05-01	225	968		126%	800	1165	375	1569	768	45	
2G04	LOST HORSE MOUNTAIN	Similkameen	1988	2014-04-27	98	309		144%	303	241	64	554	215	50	
2G05	MISSEZULA MOUNTAIN	Similkameen	1602	2014-04-27	74	269		264%	178	171	0	323	102	49	
2G06	HAMILTON HILL	Similkameen	1477	2014-04-27	66	251		132%	162	247	0	838	190	54	
3A01	GROUSE MOUNTAIN	South Coast	1126	2014-04-29	181	800		68%	1650	1602	120	2870	1170	63	
3A02	POWELL RIVER (UPPER)	South Coast	1002	NS				NS	NS		533	1712	783	6	
3A05	POWELL RIVER (LOWER)	South Coast	882	NS				NS	NS		181	426	349	4	
3A09	PALISADE LAKE	South Coast	898	2014-04-30	143	700		54%	1480	192	0	3600	1291	60	
3A10	DOG MOUNTAIN	South Coast	1007	2014-04-29	157	710		62%	1530	1361	122	2760	1137	30	
3A19	ORCHID LAKE	South Coast	1178	2014-04-30	325	1550		83%	2000	2450	900	3845	1866	41	
3A20	CALLAGHAN CREEK	South Coast	1009	2014-04-28	147	662		93%	690	1062	156	1568	711	36	
3A22P	NOSTETUKO RIVER	South Coast	1457	2014-05-01	26	399		74%	430	812	207	1053	542	24	
3A24P	UPPER MOSLEY CREEK	South Coast	1655	2014-05-01	56	227		89%	158	351	143	532	254	24	
3A25P	SQUAMISH RIVER (UPPER)	South Coast	1387	2014-05-01	281	1282		80%	1787	2072	990	2910	1597	23	
3B01	FORBIDDEN PLATEAU	Vancouver Island	1110	2014-04-30	209	929		62%	1431	2353	448	3500	1507	56	
3B02A	MT. COKEYL	Vancouver Island	1267	NS				918	1194		196	2062	813	30	
3B04	ELK RIVER	Vancouver Island	270	NS				0	0		0	0	0	29	
3B10	UPPER THELWOOD LAKE	Vancouver Island	1014	2014-04-30	194	934		63%	1500	2362	524	3560	1484	51	
3B13	HEATHER MOUNTAIN	Vancouver Island	1170	2014-04-25	110	516		58%	918	NS	183	2383	674	29	
3B17P	WOLF RIVER	Vancouver Island	1422	2014-05-01	N/A	924		68%	1175	1794	439	2691	1356	31	
3B18	WOLF RIVER (MIDDLE)	Vancouver Island	1050	2014-04-30	71	290		53%	504	774	0	1652	546	43	
3B19	WOLF RIVER (LOWER)	Vancouver Island	615	2014-04-30	0	0		0%	0	318	0	1118	134	43	
3B23P	JUMP CREEK	Vancouver Island	1134	2014-05-01	141	758		64%	1043	1751	266	3485	1180	17	
3B24	HEATHER MOUNTAIN UPPER	Vancouver Island	N/A	2014-04-25	178	852		NS	NS		N/A	N/A	N/A	0	
3C07	WEDEENE RIVER SOUTH	North Coast	196	2014-04-29	17	46		34%	42	531	0	749	136	26	
3C08P	BURNT BRIDGE CREEK	North Coast	1329	2014-05-01	157	786		101%	716	1412	454	1464	776	15	
3D01C	SUMALLO RIVER WEST	Skagit	801	2014-04-30	30	118		179%	98	201	0	371	66	21	
3D02	LIGHTNING LAKE	Skagit	1254	2014-04-26	73	278		125%	249	423	7	599	223	41	
3D03A	KLESILKWA	Skagit	1134	2014-04-30	32	144		140%	155	171	0	752	103	38	
4A02	PINE PASS	Peace	1439	2014-04-28	309	1344		104%	1238	1796	681	1825	1292	53	
4A02P	PINE PASS	Peace	1386	2014-05-01	N/A	1192		111%	1045	1596	898	1704	1072	24	
4A03	WARE (UPPER)	Peace	1563	2014-04-30	108	319		116%	288	278	141	402	274	47	
4A04	WARE (LOWER)	Peace	969	2014-04-30	48	176		142%	140	115	0	229	124	45	
4A05	GERMANSEN (UPPER)	Peace	1489	2014-04-29	128	388		109%	371	503	181	597	355	52	
4A06	TUTIZZI LAKE	Peace	1043	2014-04-29	52	194		125%	189	308	0	325	155	50	
4A07	LADY LAURIER LAKE	Peace		2014-04-30	149	557		100%	491	771	305	926	555	51	
4A09	PULPIT LAKE	Peace	1331	2014-04-30	137	519		124%	486	527	287	623	418	49	
4A09P	PULPIT LAKE	Peace	1331	2014-05-01	N/A	455		112%	489	508	288	633	407	23	
4A10	FREDRICKSON LAKE	Peace	1323	2014-04-29	99	308		133%	163	245	107	358	231	50	
4A11	TRYGVE LAKE	Peace	1409	2014-04-29	110	384		101%	372	491	272	599	381	50	
4A12	TSAYDAYCHI LAKE	Peace	1173	2014-04-29	113	415		108%	368	600	168	700	386	51	
4A13	PHILIP LAKE	Peace	1013	2014-04-29	55	203		104%	276	302	0	406	196	50	
4A16	MORFEE MOUNTAIN	Peace	1427	2014-04-28	223	973		120%	896	1001	410	1181	812	43	
4A18	MOUNT SHEBA	Peace	1480	2014-04-28	258	1091		122%	1054	1262	503	1371	891	44	
4A20	MONKMAN CREEK	Peace	1566	2014-04-30	177	709		122%	NS	NS	329	1042	580	33	
4A21	MOUNT STEARNS	Peace	1514	2014-04-30	69	196		134%	142	146	0	271	146	40	

2014 Automated Snow Pillow/Manual Snow Survey Data				May 1st					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	2013 SWE (mm)	2012 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record	
4A25	FORT ST. JOHN AIRPORT	Peace	692	NS					NS	NS	0	56	0	26	
4A27P	KWADACHA RIVER	Peace	1695	2014-05-01	N/A	291	E	82%	347	318	259	476	355	16	
4A30P	AIKEN LAKE	Peace	1061	2014-05-01	N/A	233		129%	186	275	71	313	181	28	
4B01	KIDPRICE LAKE	Skeena	1415	NS					726	1420	551	1591	951	59	
4B02	JOHANSON LAKE	Skeena	1480	2014-04-29	108	368		122%	287	370	143	433	301	51	
4B03A	HUDSON BAY MTN	Skeena	1452	2014-04-30	136	518		102%	448	724	343	795	509	41	
4B04	CHAPMAN LAKE	Skeena	1485	2014-04-30	121	428		90%	458	694	308	749	473	45	
4B06	TACHEK CREEK	Skeena	1133	NS					225	278	55	363	175	44	
4B07	MCKENDRICK CREEK	Skeena	1048	2014-04-30	75	242		109%	257	340	80	422	223	45	
4B08	MOUNT CRONIN	Skeena	1491	2014-04-30	156	495		80%	580	852	422	1125	616	42	
4B10	NINGUNSAW PASS	Nass	647	2014-04-27	68	276		105%	240	342	0	676	263	36	
4B11A	BEAR PASS	Nass	437	NS					NS	NS	256	860	541	22	
4B12P	GRANDUC MINE	Skeena	790	2014-05-01	N/A	1115		62%	1176	1973	1183	2275	1798	10	
4B13A	TERRACE AIRPORT	Skeena	219	NS					0	42	0	58	14	6	
4B14	EQUITY MINE	Skeena	1434	2014-04-29	117	404		108%	390	550	212	690	373	36	
4B15	LU LAKE	Skeena	1296	2014-04-29	94	300		112%	248	440	144	528	267	34	
4B15P	LU LAKE	Skeena	1308	2014-05-01	77	311		137%	295	404	79	517	227	15	
4B16P	SHEDIN CREEK	Skeena	1320	2014-05-01	212	597		61%	803	1182	650	1226	972	17	
4B17P	TSAI CREEK	Skeena	1369	2014-05-01	197	1050		80%	1021	2074	975	2081	1307	15	
4B18P	CEDAR - KITEEN	Skeena	912	2014-05-01	135	710		116%	497	874	210	1075	612	12	
4C01	SIKANNI LAKE	Liard	1390	2014-04-30	102	355		133%	262	296	115	404	266	50	
4C02	SUMMIT LAKE	Liard	1291	NS					106	64	0	200	44	47	
4C03	DEASE LAKE	Liard	805	2014-04-27	50	192		505%	147	0	0	178	38	47	
4C05	FORT NELSON A	Liard	368	NS					NS	NS	0	103	12	31	
4C15	JADE CITY	Liard	943	2014-04-26	88	302		160%	296	182	28	350	189	12	
4D01	TELEGRAPH CREEK	Stikine	490	NS					0	NS	0	163	23	36	
4D02	ISKUT	Stikine	931	2014-04-27	0	0		0%	NS	NS	0	146	18	23	
4E02B	ATLIN LAKE	Yukon		2014-05-01	0	0			123	NS	0	140	N/A	8	

Code	Description
A	Sampling problems were encountered
ASP	Automated Snow Pillow
B	Early or late sample
C	Combination of A and B
E	Estimate
MSS	Manual Snow Survey
N/A	Not Available
N	Scheduled, but not measured
NS	Not Sampled
SD	Snow Depth
SWE	Snow Water Equivalent
T	Trace Amount



## Snow Survey and Water Supply Bulletin May 15<sup>th</sup>, 2014

The May 15<sup>th</sup> snow survey is now complete. Data from 23 snow courses and 51 snow pillows around the province, and climate data from Environment Canada form the basis for the following report<sup>1</sup>.

### Weather

Weather in the first half of May has included periods with hot temperatures interspersed with wetter and unsettled conditions. Temperatures through the Okanagan and South Interior reached 25-29 °C during the first several days of the month, and again near the middle of the month. In the Central and North Interior, temperatures over the same periods reached the 18-22 °C range. These temperatures are 3 to 8 °C above normal for May. Only moderate amounts of precipitation were observed through the first half of May. Over the May 16-19<sup>th</sup> period, an upper low pressure system produced more wide-spread rainfall, with localized heavy rainfall amounts in some areas.

### Snowpack

Warmer weather at the start of the month ushered in the snow melt season across the province. In mid-elevation terrain, particularly through the South Interior and Skeena-Nass, snow melt has been vigorous with melt rates of 100 to 200 mm or more and rising snow lines being observed since May 1<sup>st</sup>. Broader melt of higher elevation sites and production of runoff to river systems has lagged slightly behind the mid-elevation trends, with melt rates of 50 to 100 mm since May 1<sup>st</sup> being more common. In the East and West Kootenay the transition to snow melt has been delayed with many snow survey locations experiencing no melt, or even additional snow accumulation, over the May 1<sup>st</sup> to May 15<sup>th</sup> period.

Higher than normal snow basin indices (>118%) persist in the Upper Fraser, South Thompson, West Kootenay, East Kootenay, and Similkameen (see Figure 1). This is a reflection of both higher volumes of snow water at the start of the melt season and a delay in the melt. Below normal snow basin indices (<80%) persist in the Nechako, Lower Fraser, South Coast, and Vancouver Island. The low snow basin index in the Peace basin is the result of one low snow pack measurement skewing the data from a limited number of stations; other observations indicate near-normal conditions in the region. Other regions of the province have near-normal May 15<sup>th</sup> snow basin indices. In the Middle Fraser, considerable variability exists, with lower than normal snow conditions in the western portion of the basin on the Interior Plateau, and higher than normal snow packs in the east (Cariboo Mountains).

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.



## Snow Survey and Water Supply Bulletin May 15<sup>th</sup>, 2014

Table 1 - BC Snow Basin Indices – May 15, 2014

Basin	% of Normal	Basin	% of Normal
Upper Fraser	140	West Kootenay	129
Nechako	66	Okanagan-Kettle	113
Middle Fraser	108	Similkameen	181
Lower Fraser	71	South Coast	66
North Thompson	101	Vancouver Island	55
South Thompson	119	Central Coast	92
Upper Columbia	98	Peace	62
Lower Columbia	99	Skeena-Nass	90
East Kootenay	189	Stikine	96

### Outlook

With warmer weather in early-May, the seasonal melt of the snow pack has begun. In mid-elevation watersheds, particularly through the Okanagan, South Interior and Interior Plateau, the majority of snow has now melted, and on-going flood risk from snow melt alone is subsiding. Many of the larger river systems, including the Fraser River and Thompson River, are flowing at well above normal levels for this time of year, and in many cases are approaching mean annual flow level. On the Fraser River, an estimated 26% of the freshet runoff (forecasted April-September volume) has passed through Shelley, and 22% through Hope. Typically, the peak of the runoff season occurs when 35-45% of the freshet volume has passed. On the Fraser River, on-going flood risk from snow melt is expected to last another 3 weeks. A similar time frame is expected for the Skeena River. On the North Thompson, the peak of the melt season is expected to occur over the next 1-2 weeks. The South Thompson typically peaks from mid-to-late June, and a similar time frame is expected this year. In higher elevation terrain, including the Columbia and Kootenay, considerable snow pack is still available to pose an on-going seasonal risk for flooding.

In the south-west and western parts of the province (Vancouver Island, Lower Fraser, South Coast, Central Coast, Necho), low snow packs indicate the likelihood for lower amounts of seasonal runoff and the increased potential for low flows earlier in the summer.

Short-term weather forecasts indicate the potential for showery weather into the last part of May with the potential for an emerging hot spell towards the end of the month. Steady increases in river levels on the major river systems, including the Fraser, North Thompson, South Thompson and Skeena Rivers are possible into the end of the month. With limited flow capacity in the Fraser main stem from the Fraser Canyon upstream to Prince George, and in the North Thompson, these watersheds are also sensitive to additional river rises due to rainfall.

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## Snow Survey and Water Supply Bulletin May 15<sup>th</sup>, 2014

The River Forecast Centre will continue to monitor snow pack and weather conditions and will provide an updated seasonal water supply and flood risk assessment in the June 1<sup>st</sup> 2014 Snow Bulletin, scheduled for release on June 9<sup>th</sup>, 2014. High streamflow advisories will be issued as required.

Produced by: BC River Forecast Centre  
May 22, 2014

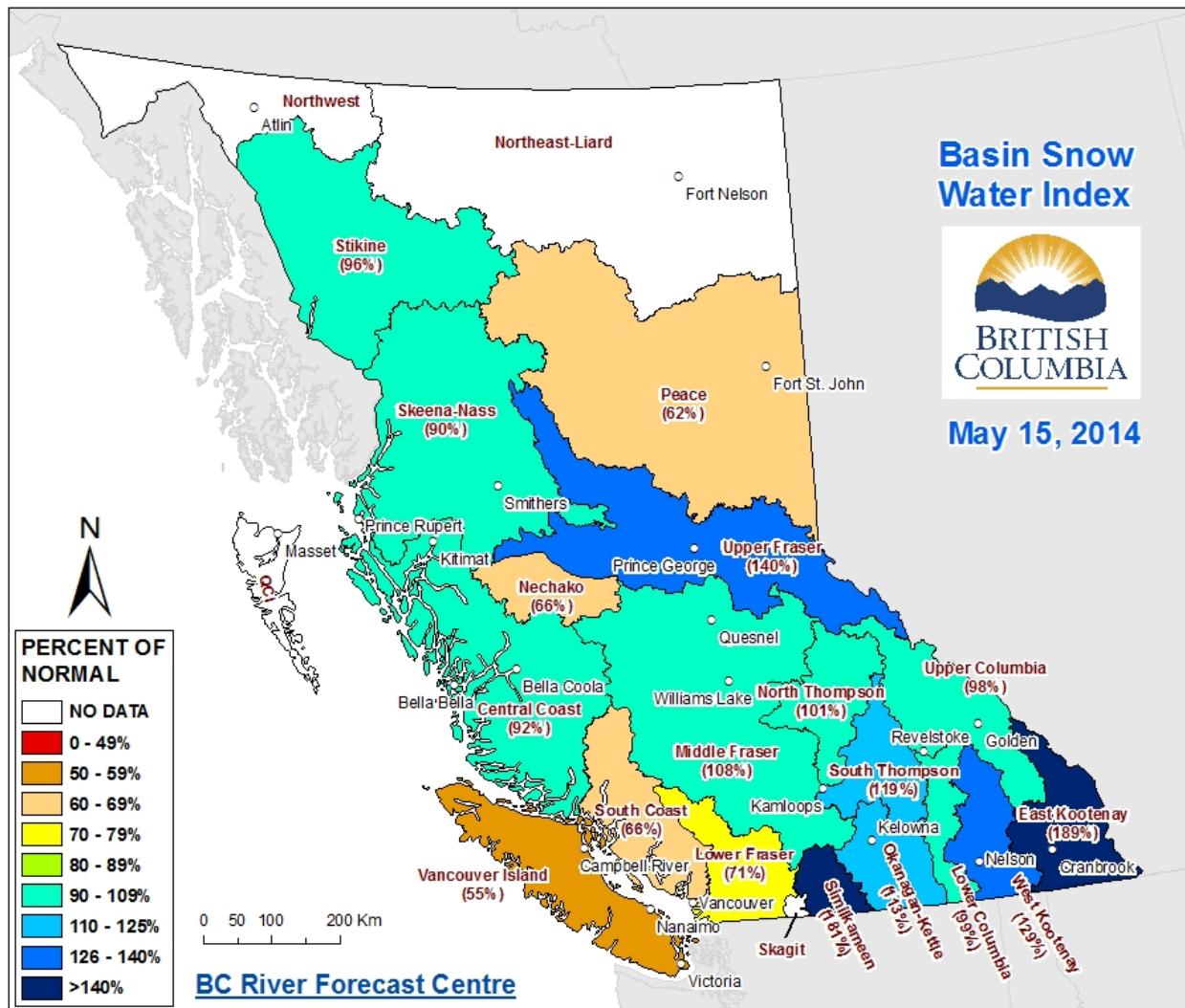


Ministry of  
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Natural Resources

RIVER FORECAST CENTRE

## Snow Survey and Water Supply Bulletin May 15<sup>th</sup>, 2014

Figure 1: Basin Snow Water Index – May 15th, 2014



2014 Automated Snow Pillow/Manual Snow Survey Data				May 15th					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	2013 SWE (mm)	2012 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record	
1A01P	YELLOWHEAD LAKE	Upper Fraser	1847	2014-05-15	119	586		112%	457	839	143	833	522	16	
1A02P	MC BRIDE (UPPER)	Upper Fraser	1608	2014-05-15	127	536		133%	353	642	65	656	403	21	
1A03P	BARKERVILLE	Upper Fraser	1483	2014-05-15	82	363		170%	136	255	0	503	213	38	
1A05	LONGWORTH (UPPER)	Upper Fraser	1693	NS					NS	1178	292	1219	798	55	
1A06A	HANSARD	Upper Fraser	622	NS					NS	NS	N/A	N/A	0	0	
1A10	PRINCE GEORGE A	Upper Fraser	684	NS					NS	NS	0	76	5	23	
1A11	PACIFIC LAKE	Upper Fraser	756	NS					NS	728	0	728	339	35	
1A12	KAZA LAKE	Upper Fraser	1247	NS					NS	NS	212	212	212	1	
1A14P	HEDRICK LAKE	Upper Fraser	1118	2014-05-15	215	1307	E	173%	1139	1242	435	1277	754	13	
1A15	KNUDSEN LAKE	Upper Fraser	1598	NS					NS	1170	359	1271	836	34	
1A16	BURNS LAKE	Upper Fraser	820	NS					NS	NS	0	0	0	17	
1A17P	REVOLUTION CREEK	Upper Fraser	1676	2014-05-15	261	1247		174%	913	1301	228	1307	716	28	
1A19P	DOME MOUNTAIN	Upper Fraser	1768	2014-05-15	221	1039		125%	859	1122	555	1215	828	7	
1A23	BIRD CREEK	Upper Fraser	1196	NS					NS	NS	0	0	0	1	
1B01	MOUNT WELLS	Nechako	1489	NS					NS	NS	164	869	280	3	
1B01P	MOUNT WELLS	Nechako	1489	2014-05-15	N/A	418		85%	317	760	171	946	491	21	
1B02	TAHTSA LAKE	Nechako	1319	NS					NS	NS	924	1687	924	2	
1B02P	TAHTSA LAKE	Nechako	1319	2014-05-15	N/A	818		64%	733	1887	674	2340	1287	21	
1B05	SKINS LAKE	Nechako	877	NS					NS	NS	0	0	0	2	
1B06	MOUNT SWANNELL	Nechako	1596	NS					NS	NS	0	331	166	2	
1B07	NUTLI LAKE	Nechako	1502	NS					NS	NS	197	197	197	1	
1B08P	MOUNT PONDOSY	Nechako	1413	2014-05-15	N/A	314		50%	264	1091	216	1198	628	21	
1C01	BROOKMERE	Middle Fraser	994	NS					NS	0	0	208	22	28	
1C05	MCGILLIVRAY PASS	Middle Fraser	1715	NS					NS	NS	184	965	455	20	
1C06	PAVILION	Middle Fraser	1209	NS					NS	NS	0	0	0	6	
1C08	NAZKO	Middle Fraser	1029	NS					NS	NS	N/A	N/A	N/A	N/A	
1C09A	HIGHLAND VALLEY	Middle Fraser	1547	NS					NS	NS	0	30	3	25	
1C12P	GREEN MOUNTAIN	Middle Fraser	1766	2014-05-15	N/A	536		67%	514	1040	424	1369	803	19	
1C13A	HORSEFLY MOUNTAIN	Middle Fraser	1612	NS					NS	NS	655	655	655	1	
1C14	BRALORNE	Middle Fraser	1382	NS					NS	NS	0	80	11	20	
1C17	MOUNT TIMOTHY	Middle Fraser	1632	NS					NS	NS	0	466	181	42	
1C18P	MISSION RIDGE	Middle Fraser	1903	2014-05-15	N/A	330		98%	345	575	0	972	336	43	
1C19	GNAWED MOUNTAIN	Middle Fraser	1617	NS					NS	NS	0	157	23	22	
1C20P	BOSS MOUNTAIN MINE	Middle Fraser	1477	2014-05-15	338	417		92%	368	402	176	746	455	19	
1C21	BIG CREEK	Middle Fraser	1130	NS					NS	NS	N/A	N/A	N/A	N/A	
1C22	PUNTZI MOUNTAIN	Middle Fraser	939	NS					NS	NS	0	0	N/A	2	
1C23	PENFOLD CREEK	Middle Fraser	1687	NS					1078	1326	585	1400	1022	44	
1C25	LAC LE JEUNE (UPPER)	Middle Fraser	1471	NS					NS	NS	0	67	22	5	
1C28	DUFFEY LAKE	Middle Fraser	1253	NS					NS	NS	N/A	N/A	N/A	N/A	
1C29	SHOVELNOSE MOUNTAIN	Middle Fraser	1456	NS					NS	NS	N/A	N/A	N/A	N/A	
1C32	DEADMAN RIVER	Middle Fraser	1463	NS					NS	NS	N/A	N/A	N/A	N/A	
1C33A	GRANITE MOUNTAIN	Middle Fraser	1175	NS					NS	NS	N/A	N/A	N/A	N/A	
1C37	BRALORNE(UPPER)	Middle Fraser	1980	NS					NS	NS	N/A	N/A	N/A	N/A	
1C38	DOWNTON LAKE (UPPER)	Middle Fraser	1884	NS					NS	NS	N/A	N/A	N/A	N/A	
1C39	BRIDGE GLACIER (LOWER)	Middle Fraser	1393	NS					NS	NS	N/A	N/A	N/A	N/A	
1C40	TYAUGHTON CREEK (NORTH)	Middle Fraser	1946	NS					NS	NS	N/A	N/A	N/A	N/A	

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1C41P	YANKS PEAK, EAST	Middle Fraser	1683	2014-05-15	210	1183		153%	843	912	386	1129	774	16
1C42	CAVERHILL LAKE NEW	Middle Fraser	N/A	NS										
1D06P	TENQUILLE LAKE	Lower Fraser	1669	2014-05-15	166	692		71%	754	1352	469	1693	973	12
1D08	STAVE LAKE	Lower Fraser	1211	NS					NS	NS	2438	2438	N/A	1
1D09	WAHLEACH LAKE	Lower Fraser	1395	NS					NS	NS	102	656	428	10
1D09P	WAHLEACH LAKE	Lower Fraser	1408	2014-05-15	N/A	940		94%	1097	1085	310	1793	1001	21
1D10	NAHATLATCH RIVER	Lower Fraser	1530	NS					NS	NS	1202	2423	1467	4
1D16	DICKSON LAKE	Lower Fraser	1147	NS					NS	NS	2070	2070	2070	1
1D17P	CHILLIWACK RIVER	Lower Fraser	1621	2014-05-15	441	2200		157%	1777	2398	405	2540	1398	21
1D18P	DISAPPOINTMENT LAKE	Lower Fraser	932	2014-05-15	N/A	923	E	71%	1169	1852	76	2369	1300	13
1D19P	SPUZZUM CREEK	Lower Fraser	1197	2014-05-15	251	1434		94%	1646	2211	49	2900	1533	14
1E01B	BLUE RIVER	North Thompson	673	NS					NS	NS	0	213	N/A	11
1E02P	MOUNT COOK	North Thompson	1574	2014-05-15	256	1328		100%	1353	1579	855	1793	1334	13
1E03A	TROPHY MOUNTAIN	North Thompson	1907	2014-05-10	173	697		113%	637	915	301	1114	618	32
1E05	KNOUFF LAKE	North Thompson	1189	NS					NS	NS	N/A	N/A	N/A	N/A
1E07	ADAMS RIVER	North Thompson	1769	2014-05-10	183	785		114%	684	949	280	1158	690	43
1E08P	AZURE RIVER	North Thompson	1625	2014-05-15	177	1006		87%	1398	1410	746	1684	1152	16
1E10P	KOSTAL LAKE	North Thompson	1760	2014-05-15	208	883		101%	922	1091	569	1358	870	28
1F01A	ABERDEEN LAKE	South Thompson	1262	NS					NS	NS	0	28	14	11
1F02	ANGLEMONT	South Thompson	1168	2014-05-16	17	113		114%	NS	NS	0	361	99	20
1F03P	PARK MOUNTAIN	South Thompson	1857	2014-05-15	254	1145		123%	1009	941	315	1358	929	28
1F04	ENDERBY	South Thompson	1948	2014-05-12	281	1247		116%	1183	1213	662	1499	1072	51
1F06P	CELISTA MOUNTAIN	South Thompson	1533	2014-05-15	194	1044		124%	1021	1080	420	1163	841	8
2A01A	CANOE RIVER	Upper Columbia	866	NS					NS	NS	0	0	0	5
2A02	GLACIER	Upper Columbia	1249	NS					NS	NS	114	1034	498	47
2A03A	FIELD	Upper Columbia	1310	NS					NS	NS	0	0	0	3
2A06P	MOUNT REVELSTOKE	Upper Columbia	1770	2014-05-15	N/A	1177		95%	1312	1443	700	1777	1235	20
2A07	KICKING HORSE	Upper Columbia	1648	NS					NS	NS	0	521	229	47
2A11	BEAVERFOOT	Upper Columbia	1924	NS					NS	NS	0	399	146	4
2A14	MOUNT ABBOT	Upper Columbia	2031	NS					NS	NS	837	1944	1319	37
2A16	GOLDSTREAM	Upper Columbia	1914	NS					NS	NS	1055	1055	1055	1
2A17	FIDELITY MOUNTAIN	Upper Columbia	1852	NS					NS	NS	837	1950	1271	33
2A18	KEYSTONE CREEK	Upper Columbia	1839	NS					NS	NS	683	683	683	1
2A19	VERMONT CREEK	Upper Columbia	1533	NS					NS	NS	225	813	225	2
2A21P	MOLSON CREEK	Upper Columbia	1930	2014-05-15	N/A	1091		101%	1167	1575	602	1707	1085	32
2A22	SUNBEAM LAKE	Upper Columbia	2066	NS					NS	NS	863	863	863	1
2A23	BUSH RIVER	Upper Columbia	1982	NS					NS	NS	766	766	766	1
2A25	KIRBYVILLE LAKE	Upper Columbia	1739	NS					NS	NS	1130	1257	1194	2
2A27	DOWNIE SLIDE (LOWER)	Upper Columbia	964	NS					NS	NS	0	522	297	9
2A29	DOWNIE SLIDE (UPPER)	Upper Columbia	1628	NS					NS	NS	582	1425	1284	9
2B02A	FARRON	Lower Columbia	1229	2014-05-13	6	25		40%	0	40	0	222	63	34
2B05	WHATSHAN (UPPER)	Lower Columbia	1476	NS					NS	NS	164	737	164	3
2B06	BARNES CREEK	Lower Columbia	1598	NS					NS	NS	260	594	260	3
2B06P	BARNES CREEK	Lower Columbia	1595	2014-05-15	N/A	630		144%	494	563	98	758	438	20
2B07	KOCH CREEK	Lower Columbia	1813	NS					NS	NS	675	1148	675	2
2B08	ST. LEON CREEK	Lower Columbia	1828	NS					NS	NS	1218	1218	1218	1
2B08P	ST. LEON CREEK	Lower Columbia	1822	2014-05-15	N/A	1292		129%	1130	1211	639	1568	1004	20
2B09	RECORD MOUNTAIN	Lower Columbia	1906	2014-05-17	126	550		85%	366	335	83	1367	645	39

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2C01	SINCLAIR PASS	East Kootenay	1374	NS				NS	NS		0	107	0	22
2C04	SULLIVAN MINE	East Kootenay	1580	2014-05-14	65	248		310%	0	218	0	457	80	62
2C07	FERNIE EAST	East Kootenay	1213	2014-05-15	17	62		182%	0	0	0	298	34	52
2C09Q	MORRISSEY RIDGE	East Kootenay	1966	2014-05-15	N/A	1079		223%	93	784	0	1102	484	33
2C10P	MOYIE MOUNTAIN	East Kootenay	1840	2014-05-15	86	458		204%	0	333	0	678	225	34
2C11	KIMBERLEY (UPPER) VOR	East Kootenay	2148	NS				NS	570	570	570	570	N/A	1
2C12	KIMBERLEY (MIDDLE) VOR	East Kootenay	1692	NS				NS	44		44	44	N/A	1
2C14	FLOE LAKE	East Kootenay	2087	NS				NS	NS		733	733	733	1
2C14P	FLOE LAKE	East Kootenay	2110	2014-05-15	N/A	923		123%	731	1080	304	1101	752	20
2C15	MOUNT ASSINIBOINE	East Kootenay	2230	NS				NS	NS		534	534	534	1
2C16	MOUNT JOFFRE	East Kootenay	1763	NS				NS	NS		338	338	338	1
2C17	THUNDER CREEK	East Kootenay	2062	NS				NS	NS		220	220	220	1
2C20	VERMILLION RIVER NO. 3	East Kootenay	1612	NS				NS	NS		0	381	N/A	7
2D02	FERGUSON	West Kootenay	929	NS				NS	NS		20	640	302	36
2D03	SANDON	West Kootenay	1072	NS				NS	NS		0	218	N/A	8
2D04	NELSON	West Kootenay	952	NS				NS	NS		0	243	46	41
2D05	GRAY CREEK (LOWER)	West Kootenay	1558	NS				NS	NS		0	709	330	49
2D06	CHAR CREEK	West Kootenay	1290	2014-05-15	89	378		139%	212	471	N/A	N/A	272	
2D07A	DUNCAN LAKE NO. 2	West Kootenay	662	NS				NS	NS		N/A	N/A	N/A	N/A
2D08P	EAST CREEK	West Kootenay	2004	2014-05-15	N/A	952	E	109%	533	983	461	1387	874	32
2D09	MOUNT TEMPLEMAN	West Kootenay	1879	NS				NS	NS		978	978	978	1
2D10	GRAY CREEK (UPPER)	West Kootenay	1926	NS				NS	NS		311	1194	709	30
2D14P	REDFISH CREEK	West Kootenay	2086	2014-05-15	302	1497		114%	1352	1785	1024	1771	1309	11
2E01	MONASHEE PASS	Kettle	1387	NS				NS	NS		0	363	206	27
2E02	CARMI	Kettle	1254	NS				NS	NS		0	0	N/A	14
2E03	BIG WHITE MOUNTAIN	Kettle	1672	2014-05-14	116	421		115%	297	475	0	732	366	48
2E06	BLUEJOINT MOUNTAIN	Kettle	1990	NS				NS	NS		N/A	N/A	N/A	N/A
2E07P	GRANO CREEK	Kettle	1874	2014-05-15	121	582	E	112%	553	648	290	881	520	15
2F01	TROUT CREEK	Okanagan	1428	NS				0	7		0	307	11	61
2F01A	TROUT CREEK (WEST)	Okanagan	1430	2014-05-14	17	60		103%	0	50	0	243	58	4
2F02	SUMMERLAND RESERVOIR	Okanagan	1304	NS				0	0		0	218	13	48
2F03	MC CULLOCH	Okanagan	1266	NS				NS	NS		0	102	0	37
2F04	GRAYSTOKE LAKE	Okanagan	1818	NS				NS	NS		0	742	360	17
2F05P	MISSION CREEK	Okanagan	1794	2014-05-15	147	679		176%	469	553	0	829	386	43
2F07	POSTILL LAKE	Okanagan	1358	NS				NS	NS		71	180	143	7
2F08	GRAYBACK RESERVOIR	Okanagan	1548	2014-05-11	66	225		285%	0	80	0	323	79	43
2F09	WHITEROCKS MOUNTAIN	Okanagan	1789	2014-05-13	92	375		105%	439	460	0	968	357	43
2F10	SILVER STAR MOUNTAIN	Okanagan	1834	2014-05-16	182	810		122%	724	791	100	1054	665	55
2F11	ISINTOK LAKE	Okanagan	1651	2014-05-16	0	0		0%	0	33	0	386	46	48
2F12	MOUNT KOBAU	Okanagan	1817	2014-05-14	47	163		64%	379	287	0	516	253	47
2F13	ESPERON CR (UPPER)	Okanagan	1634	NS				310	NS		66	625	306	10
2F14	ESPERON CR (MIDDLE)	Okanagan	1440	NS				128	NS		0	380	164	12
2F18	BRENDA MINE	Okanagan	1453	NS				NS	NS		0	368	95	26
2F18P	BRENDA MINE	Okanagan	1453	2014-05-15	N/A	0		0%	10	3	0	208	20	20
2F19	OYAMA LAKE	Okanagan	1365	NS				NS	NS		97	97	N/A	1
2F20	VASEUX CREEK	Okanagan	1403	2014-05-14	0	0		0%	NS	0	0	80	7	40
2F21	BOULEAU LAKE	Okanagan	1405	NS				NS	NS		173	328	328	3
2F23	MACDONALD LAKE	Okanagan	1742	NS				NS	NS		0	652	334	19

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2F24	ISLAHT LAKE	Okanagan	1492	2014-05-15	31	115		52%	0	NS	0	352	221	6	
2F25	POSTILL LAKE (UPPER)	Okanagan	1500	NS					NS	NS	N/A	N/A	N/A	N/A	
2G03P	BLACKWALL PEAK	Similkameen	1934	2014-05-15	180	844		126%	571	1047	208	1481	671	45	
2G04	LOST HORSE MOUNTAIN	Similkameen	1988	2014-05-10	82	285		169%	92	221	0	577	169	47	
2G05	MISSEZULA MOUNTAIN	Similkameen	1602	2014-05-10	37	138		431%	0	78	0	218	32	50	
2G06	HAMILTON HILL	Similkameen	1477	NS					0	NS	0	434	110	35	
3A01	GROUSE MOUNTAIN	South Coast	1126	NS					NS	NS	528	1714	N/A	3	
3A02	POWELL RIVER (UPPER)	South Coast	1002	NS					NS	NS	816	816	816	1	
3A05	POWELL RIVER (LOWER)	South Coast	882	NS					NS	NS	378	378	378	1	
3A09	PALISADE LAKE	South Coast	898	NS					NS	NS	336	3600	1968	4	
3A10	DOG MOUNTAIN	South Coast	1007	NS					1180	1358	0	2920	1041	27	
3A19	ORCHID LAKE	South Coast	1178	NS					NS	2280	774	3730	1729	30	
3A20	CALLAGHAN CREEK	South Coast	1009	NS					NS	NS	55	1311	444	16	
3A22P	NOSTETUKO RIVER	South Coast	1457	2014-05-15	0	229		65%	164	703	19	939	355	24	
3A24P	UPPER MOSLEY CREEK	South Coast	1655	2014-05-15	22	135		91%	0	257	0	467	149	24	
3A25P	SQUAMISH RIVER (UPPER)	South Coast	1387	2014-05-15	216	984		66%	1582	1872	709	2980	1486	23	
3B01	FORBIDDEN PLATEAU	Vancouver Island	1110	NS					NS	NS	345	2631	1576	27	
3B02A	MT. COKELY	Vancouver Island	1267	NS					NS	NS	N/A	N/A	N/A	N/A	
3B04	ELK RIVER	Vancouver Island	270	NS					NS	NS	N/A	N/A	N/A	N/A	
3B10	UPPER THELWOOD LAKE	Vancouver Island	1014	NS					NS	NS	1364	2697	1731	7	
3B13	HEATHER MOUNTAIN	Vancouver Island	1170	NS					NS	NS	1519	1519	N/A	1	
3B17P	WOLF RIVER	Vancouver Island	1422	2014-05-15	N/A	681		55%	860	1678	213	2719	1229	31	
3B18	WOLF RIVER (MIDDLE)	Vancouver Island	1050	NS					NS	NS	0	1148	481	13	
3B19	WOLF RIVER (LOWER)	Vancouver Island	615	NS					NS	NS	0	549	78	13	
3B23P	JUMP CREEK	Vancouver Island	1134	2014-05-15	78	440		40%	544	1602	0	3500	1097	17	
3B24	HEATHER MOUNTAIN UPPER	Vancouver Island	N/A	NS					NS	NS	N/A	N/A	N/A	N/A	
3C07	WEDEENE RIVER SOUTH	North Coast	196	NS					NS	NS	232	232	232	1	
3C08P	BURNT BRIDGE CREEK	North Coast	1329	2014-05-15	114	586		92%	418	1358	184	1438	634	15	
3D01C	SUMALLO RIVER WEST	Skagit	801	NS					NS	NS	N/A	N/A	N/A	N/A	
3D02	LIGHTNING LAKE	Skagit	1254	NS					NS	NS	544	544	N/A	1	
3D03A	KLESILKWA	Skagit	1134	NS					NS	NS	0	490	11	4	
4A02	PINE PASS	Peace	1439	NS					NS	NS	408	1570	1242	25	
4A02P	PINE PASS	Peace	1386	2014-05-15	N/A	1030		103%	941	1553	813	1654	999	24	
4A03	WARE (UPPER)	Peace	1563	NS					NS	NS	114	114	114	1	
4A04	WARE (LOWER)	Peace	969	NS					NS	NS	0	0	0	1	
4A05	GERMANSEN (UPPER)	Peace	1489	NS					NS	NS	272	414	272	4	
4A06	TUTIZZI LAKE	Peace	1043	NS					NS	NS	0	0	0	1	
4A07	LADY LAURIER LAKE	Peace		NS					NS	NS	420	420	420	1	
4A09	PULPIT LAKE	Peace	1331	NS					NS	NS	230	293	262	2	
4A09P	PULPIT LAKE	Peace	1331	2014-05-15	N/A	256		96%	288	448	14	562	267	23	
4A10	FREDRICKSON LAKE	Peace	1323	NS					NS	NS	74	74	74	1	
4A11	TRYGVE LAKE	Peace	1409	NS					NS	NS	269	269	269	1	
4A12	TSAYDAYCHI LAKE	Peace	1173	NS					NS	NS	302	302	302	1	
4A13	PHILIP LAKE	Peace	1013	NS					NS	NS	128	128	128	1	
4A16	MORFEE MOUNTAIN	Peace	1427	NS					NS	NS	343	1072	535	10	
4A18	MOUNT SHEBA	Peace	1480	NS					NS	NS	340	1179	794	9	
4A20	MONKMAN CREEK	Peace	1566	NS					NS	NS	0	912	478	8	
4A21	MOUNT STEARNS	Peace	1514	NS					NS	NS	45	45	45	1	

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4A25	FORT ST. JOHN AIRPORT	Peace	692	NS					NS	NS	0	0	N/A	4	
4A27P	KWADACHA RIVER	Peace	1695	2014-05-15	N/A	67	E	20%	266	279	90	468	334	16	
4A30P	AIKEN LAKE	Peace	1061	2014-05-15	N/A	68		124%	4	159	0	206	55	28	
4B01	KIDPRICE LAKE	Skeena	1415	NS					NS	NS	534	1278	534	2	
4B02	JOHANSON LAKE	Skeena	1480	NS					NS	NS	178	178	178	1	
4B03A	HUDSON BAY MTN	Skeena	1452	2014-05-14	88	381		90%	274	698	160	822	424	41	
4B04	CHAPMAN LAKE	Skeena	1485	NS					NS	689	238	689	461	6	
4B06	TACHEK CREEK	Skeena	1133	NS					NS	NS	18	152	N/A	4	
4B07	MCKENDRICK CREEK	Skeena	1048	NS					NS	309	0	320	127	20	
4B08	MOUNT CRONIN	Skeena	1491	NS					NS	892	481	927	660	12	
4B10	NINGUNSAW PASS	Nass	647	NS					NS	198	0	208	27	14	
4B11A	BEAR PASS	Nass	437	NS					NS	NS	80	488	290	8	
4B12P	GRANDUC MINE	Skeena	790	2014-05-15	N/A	992	E	59%	1099	1971	1100	2187	1677	10	
4B13A	TERRACE AIRPORT	Skeena	219	NS					NS	NS	0	0	0	1	
4B14	EQUITY MINE	Skeena	1434	NS					NS	NS	0	396	274	12	
4B15	LU LAKE	Skeena	1296	NS					NS	NS	0	330	191	13	
4B15P	LU LAKE	Skeena	1308	2014-05-15	13	85		59%	42	337	0	489	144	15	
4B16P	SHEDIN CREEK	Skeena	1320	2014-05-15	151	498		53%	768	1270	574	1280	940	17	
4B17P	TSAI CREEK	Skeena	1369	2014-05-15	146	950		75%	981	2065	810	2135	1275	15	
4B18P	CEDAR - KITEEN	Skeena	912	2014-05-15	75	429		102%	245	777	29	968	422	12	
4C01	SIKANNI LAKE	Liard	1390	NS					NS	NS	130	130	130	1	
4C02	SUMMIT LAKE	Liard	1291	NS					NS	NS	0	160	42	7	
4C03	DEASE LAKE	Liard	805	NS					NS	NS	0	0	N/A	6	
4C05	FORT NELSON A	Liard	368	NS					NS	NS	0	16	1	13	
4C15	JADE CITY	Liard	943	NS					NS	NS	162	162	162	1	
4D01	TELEGRAPH CREEK	Stikine	490	NS					NS	NS	0	0	0	1	
4D02	ISKUT	Stikine	931	NS					NS	NS	0	0	0	15	
4E02B	ATLIN LAKE	Yukon		NS					NS	NS	N/A	N/A	N/A	N/A	

Code	Description
A	Sampling problems were encountered
ASP	Automated Snow Pillow
B	Early or late sample
C	Combination of A and B
E	Estimate
MSS	Manual Snow Survey
N/A	Not Available
N	Scheduled, but not measured
NS	Not Sampled
SD	Snow Depth
SWE	Snow Water Equivalent
T	Trace Amount



## Snow Survey and Water Supply Bulletin June 1<sup>st</sup>, 2014

The June 1<sup>st</sup> snow survey is now complete. Data from 23 snow courses and 51 snow pillows around the province and climate data from Environment Canada form the basis for the following report<sup>1</sup>.

### Weather

May weather featured a mix of hot, dry spells interspersed with unsettled, wetter conditions. Major rainfall events were limited, with the exception of the Central Interior and Cariboo Mountains which received considerable amounts of precipitation.

Temperatures through May were generally 1-3 °C above normal through western British Columbia (including Vancouver Island, South Coast, Central Coast, North Coast, Skeena, Okanagan/South Interior, and Central Interior/Chilcotin). Temperatures were nearer to normal in eastern British Columbia.

Drier than normal conditions were experienced in May through most of south-western British Columbia and South Interior. Precipitation was well above normal through the Upper Columbia, Central Interior/Cariboo, and Skeena/Bulkley. Near normal June precipitation was observed elsewhere in the province.

### Snowpack

Periods of hotter weather through May led to rapid snow melt, particularly in the mid-elevation snow packs of the province. June 1<sup>st</sup> snow basin indices (Table 1) decreased since May 15<sup>th</sup> in western British Columbia and the Peace region. In the higher elevation terrain in eastern British Columbia, larger amounts of accumulated snow earlier in the season, some additional late season snowfall and delays in melt have led to increased June 1<sup>st</sup> snow basin indices since May 15<sup>th</sup>.

Snow basin indices are well below normal (<50%) in the Nechako, Lower Fraser, South Coast, Vancouver Island, Central Coast, and Skeena-Nass. In the Nechako and Peace, snow packs are below normal (50-60%). Near-normal (90-110%) snow basin indices are present in the North Thompson, Upper Columbia and East Kootenay, and above-normal (>120%) in the Upper Fraser, South Thompson, Lower Columbia, West Kootenay, Okanagan, and Similkameen. In the Similkameen and Okanagan, snow basin indices are based primarily on higher-elevation sites; mid-elevation snow is now gone in these watersheds, and the high indices are reflective of snow conditions in only a small portion of their watershed area.

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.



## Snow Survey and Water Supply Bulletin June 1<sup>st</sup>, 2014

Table 1 - BC Snow Basin Indices – June 1, 2014

Basin	% of Normal	Basin	% of Normal
Upper Fraser	145	West Kootenay	130
Nechako	14	Okanagan-Kettle	123
Middle Fraser	50	Similkameen	167
Lower Fraser	36	South Coast	44
North Thompson	101	Vancouver Island	35
South Thompson	126	Central Coast	34
Upper Columbia	108	Peace	56
Lower Columbia	141	Skeena-Nass	16
East Kootenay	104		

### Streamflow Conditions

Stream flow in many of the major river systems of the province has been above average through May. This includes the Fraser, North Thompson, South Thompson, Skeena, Similkameen, and Stikine River. In the Cariboo and North Thompson region, rapid snow melt and persistent rainfall led to high flows in tributary rivers, including the Quesnel River, Horesfly River, Clearwater River and North Thompson River. These rivers reached 5-year to 20-year return period flows in late-May. Over the same period, flows on the main stem of the Fraser River, from Prince George, through the Fraser Canyon, and into the Fraser Valley, reached a 5-year return period flow.

### Outlook

In many of the watersheds of the province, high snow melt rates in May led to diminished quantities of remaining snow, and decreases in the remaining seasonal risk for flooding. This includes the Fraser River through to and including the Lower Mainland, North Thompson River, Okanagan, Similkameen, Peace and Skeena basins. Flood risk due to rapid snow melt is unlikely at this point, but is possible if areas receive extreme rainfall. On the South Thompson River and Shuswap Lake, higher elevation snow is still feeding on-going rises in river and lake levels, with a peak expected by mid-June.

Seasonal forecasts from Environment Canada continue to indicate an increased likelihood of above normal temperatures across British Columbia, particularly through south and southwest parts of the province.

With low seasonal snow packs on Vancouver Island, South Coast, Middle Fraser, Lower Fraser, Central Coast, Nechako, Skeena, and Peace, these regions are expected to transition into lower than normal flows into the summer. These regions are at increased risk for

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## Snow Survey and Water Supply Bulletin June 1<sup>st</sup>, 2014

potential low stream flows this year, particularly if late-spring and summer weather is hot and dry.

The River Forecast Centre will continue to monitor snow pack conditions and will provide an updated seasonal water supply and flood risk assessment in the June 15<sup>th</sup> 2014 Snow Bulletin, scheduled for release on June 23<sup>rd</sup>, 2014.

Produced by: BC River Forecast Centre

June 9, 2014

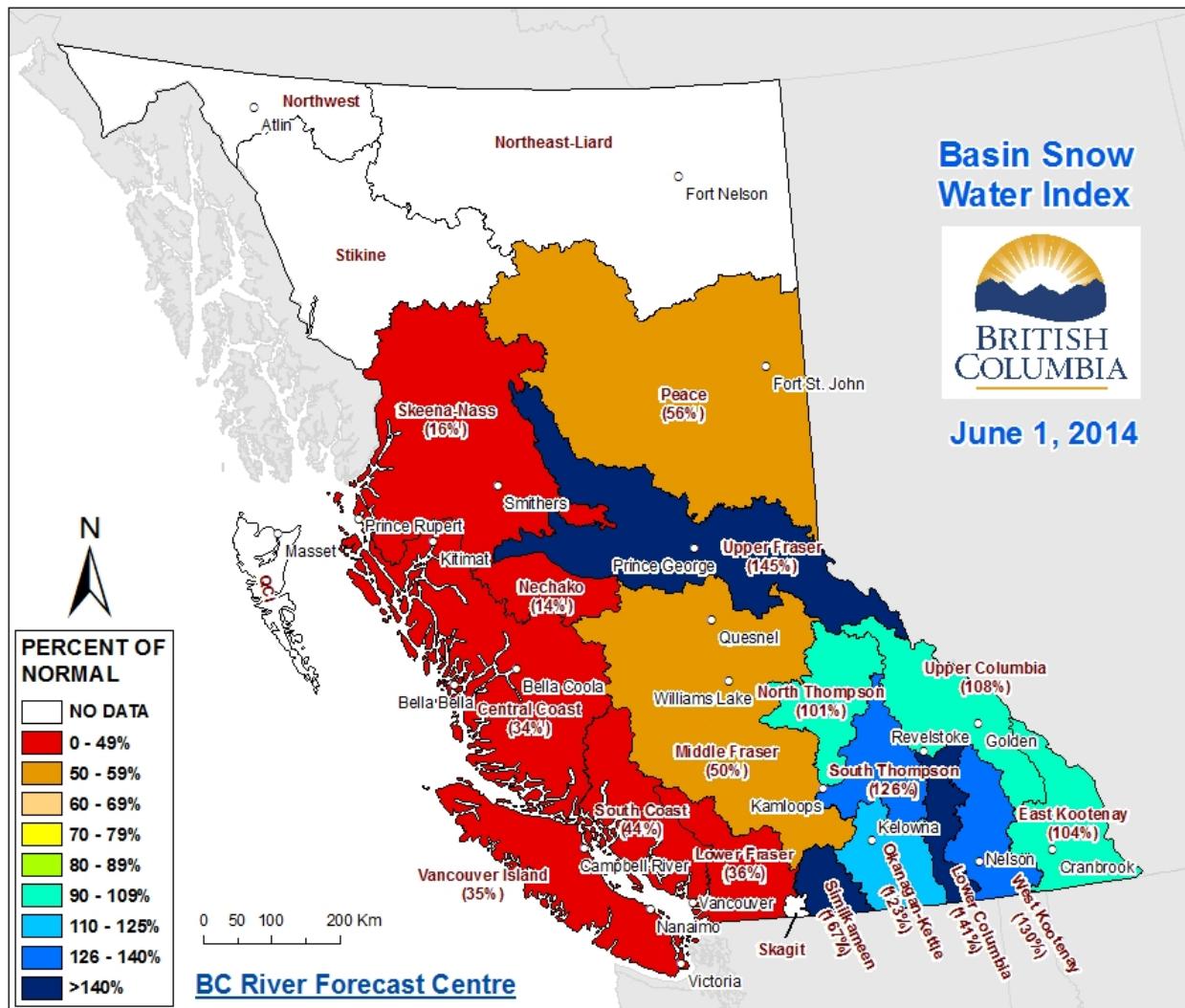


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Forests, Lands and  
Natural Resources

RIVER FORECAST CENTRE

## Snow Survey and Water Supply Bulletin June 1<sup>st</sup>, 2014

Figure 1: Basin Snow Water Index – June 1<sup>st</sup>, 2014





## Snow Survey and Water Supply Bulletin June 15<sup>th</sup>, 2014

The June 15<sup>th</sup> snow survey is now complete. Data from 2 snow courses and 51 snow pillows around the province and climate data from Environment Canada form the basis for the following report<sup>1</sup>.

### Weather

June weather has featured episodes of cold upper low systems, which have delivered periods of wet weather, particularly through southern British Columbia. Despite this, precipitation over the first half of June has been below normal to normal across most of the province. Temperatures have been near normal through most areas.

### Snowpack

The first two weeks of June has seen on-going melt of the season's snow pack with 200 mm to 400 mm of snow water equivalent of melt observed at most snow pillows around the province. At high elevation sites (>1500m-1600m), particularly in the Upper Fraser, North Thompson, South Thompson, Columbia, Kootenay, Okanagan, Similkameen and Peace, snow packs are generally above normal. High elevation snow pillows have 20%-60% of the season's snow pack remaining. In mid-elevation sites, the season's snow pack has largely melted. This includes the Nchako, Middle Fraser, Lower Fraser, Columbia, Okanagan, South Coast, Vancouver Island, Peace, Skeena and Stikine.

### Streamflow Conditions

On the major river systems of the province (Fraser, Thompson, Skeena), approximately 50-60% of the forecasted seasonal runoff volume (April-September) has passed. In May, many rivers had above-normal flow due to warm weather. In the first half of June, depletion of mid-elevation snow packs has led to river levels dropping to near normal levels for the time of year. In the Peace, stream flow in many tributaries has dropped to below normal (50-80%). On Vancouver Island, stream flows have dropped to below or well-below normal levels (20-80% of normal).

### Outlook

Snow packs have now diminished to the level that flood risk due to snow melt is now unlikely across the province. Flood risk due to extreme rainfall remains a possibility.

In areas with depleted snow packs, stream flows have transitioned, or are expected to transition into lower than normal flow. This is particularly the case on Vancouver Island, South Coast, Middle Fraser, Lower Fraser, Central Coast, Nchako, Skeena, and Peace. These regions are at increased risk for potential low flows this year. With very low snow packs on Vancouver Island this year, watersheds are particularly vulnerable to low flows from hot and dry summer weather.

Seasonal forecasts from Environment Canada continue to indicate an increased likelihood of above normal temperatures across British Columbia, particularly through the south and south-west parts of the province.

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## Snow Survey and Water Supply Bulletin June 15<sup>th</sup>, 2014

This is the last Snow Survey and Water Supply Bulletin of the year. The River Forecast Centre continues to monitor snow pack, weather and stream flow conditions across the province. Updates on stream flow conditions will be made in the Water Supply and Stream flow Bulletins which will be released through the summer as conditions warrant. Low flow advisories will be issued if required.

Produced by: BC River Forecast Centre

June 23, 2014

2014 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	2013 SWE (mm)	2012 SWE (mm)	Minimum (mm)	Maximum (mm)	1981-2010 Normal (mm)	Years of Record
1A01P	YELLOWHEAD LAKE	Upper Fraser	1847	2014-06-15	8	122		90%	29	410	0	641	135	16
1A02P	MC BRIDE (UPPER)	Upper Fraser	1608	2014-06-15	9	18		1800%	0	141	0	159	1	21
1A03P	BARKERVILLE	Upper Fraser	1483	2014-06-15	3	0		0%	1	0	0	37	3	38
1A14P	HEDRICK LAKE	Upper Fraser	1118	2014-06-15	76	624		1642%	375	557	0	587	38	13
1A17P	REVOLUTION CREEK	Upper Fraser	1676	2014-06-15	140	727		326%	436	901	0	927	223	28
1A19P	DOME MOUNTAIN	Upper Fraser	1768	2014-06-15	103	612		167%	388	901	0	925	367	7
1B01P	MOUNT WELLS	Nechako	1489	2014-06-15	N/A	0		0%	0	258	0	321	44	21
1B02P	TAHTSA LAKE	Nechako	1319	2014-06-15	N/A	29		5%	44	1335	0	1870	617	21
1B08P	MOUNT PONDOSY	Nechako	1413	2014-06-15	N/A	7		9%	0	496	0	520	75	21
1C12P	GREEN MOUNTAIN	Middle Fraser	1766	2014-06-15	N/A	2		1%	14	600	0	887	272	19
1C18P	MISSION RIDGE	Middle Fraser	1903	2014-06-15	N/A	0		0%	0	0	0	387	15	43
1C20P	BOSS MOUNTAIN MINE	Middle Fraser	1477	2014-06-15	0	0		0%	0	0	0	83	6	19
1C41P	YANKS PEAK, EAST	Middle Fraser	1683	2014-06-15	91	577		302%	211	422	0	698	191	16
1D06P	TENQUILLE LAKE	Lower Fraser	1669	2014-06-15	15	1		0%	181	893	0	1177	434	12
1D09P	WAHLEACH LAKE	Lower Fraser	1408	2014-06-15	N/A	620		96%	751	994	0	1281	643	21
1D17P	CHILLIWACK RIVER	Lower Fraser	1621	2014-06-15	443	1424.481	E	179%	1263	1908	0	2022	797	21
1D18P	DISAPPOINTMENT LAKE	Lower Fraser	932	2014-06-15	N/A	424	E	80%	656	1316	0	1919	532	13
1D19P	SPUZZUM CREEK	Lower Fraser	1197	2014-06-15	93	632		71%	764	1660	0	2320	886	14
1E02P	MOUNT COOK	North Thompson	1574	2014-06-15	139	866		127%	892	1096	281	1155	681	13
1E08P	AZURE RIVER	North Thompson	1625	2014-06-15	56	405		81%	583	962	75	1500	499	16
1E10P	KOSTAL LAKE	North Thompson	1760	2014-06-15	98	563		160%	539	840	0	1248	351	28
1F03P	PARK MOUNTAIN	South Thompson	1857	2014-06-15	126	751		164%	591	753	0	1095	458	28
1F06P	CELISTA MOUNTAIN	South Thompson	1533	2014-06-15		284		159%	143	545	0	573	179	8
2A06P	MOUNT REVELSTOKE	Upper Columbia	1770	2014-06-15	N/A	808		115%	679	1120	0	1801	700	20
2A21P	MOLSON CREEK	Upper Columbia	1930	2014-06-15	N/A	683		119%	740	1091	0	1136	575	32
2B06P	BARNES CREEK	Lower Columbia	1595	2014-06-15	N/A	0		0%	0	4	0	211	10	20
2B08P	ST. LEON CREEK	Lower Columbia	1822	2014-06-15	N/A	874		172%	597	911	0	1336	509	20
2B09	RECORD MOUNTAIN	Lower Columbia	1906	2014-06-14	0	#N/A			36	185	N/A	N/A	127	
2C09Q	MORRISSEY RIDGE	East Kootenay	1966	2014-06-15	N/A	21		62%	0	41	0	458	34	33
2C10P	MOYIE MOUNTAIN	East Kootenay	1840	2014-06-15	1	0		0%	0	0	0	69	1	34
2C14P	FLOE LAKE	East Kootenay	2110	2014-06-15	N/A	484		145%	470	795	0	866	334	20
2D08P	EAST CREEK	West Kootenay	2004	2014-06-15	N/A	634	E	137%	351	705	0	1163	464	32
2D14P	REDFISH CREEK	West Kootenay	2086	2014-06-15	167	996		120%	991	1702	645	1722	831	11
2E07P	GRANO CREEK	Kettle	1874	2014-06-15	5	179	E	213%	61	325	0	509	84	15
2F05P	MISSION CREEK	Okanagan	1794	2014-06-15	44	225		425%	0	311	0	424	53	43
2F18P	BRENDA MINE	Okanagan	1453	2014-06-15	N/A	0		0%	8	0	0	8	3	20
2G03P	BLACKWALL PEAK	Similkameen	1934	2014-06-15	85	438		201%	175	667	0	1031	218	45
3A22P	NOSTETUKO RIVER	South Coast	1457	2014-06-15	0	0		0%	0	0	0	266	20	24
3A24P	UPPER MOSLEY CREEK	South Coast	1655	2014-06-15	0	0		0%	0	0	0	0	1	24
3A25P	SQUAMISH RIVER (UPPER)	South Coast	1387	2014-06-15	48	11	E	1%	732	1431	131	2505	786	23
3B17P	WOLF RIVER	Vancouver Island	1422	2014-06-15	N/A	1		0%	346	1194	0	2183	609	31
3B23P	JUMP CREEK	Vancouver Island	1134	2014-06-15	7	2		1%	3	768	0	2700	337	17
3C08P	BURNT BRIDGE CREEK	North Coast	1329	2014-06-15	0	0		0%	0	701	0	739	99	15

4A02P	PINE PASS	Peace	1386	2014-06-15	N/A	601		185%	237	1114	0	1142	324	24
4A09P	PULPIT LAKE	Peace	1331	2014-06-15	N/A	0		0%	0	0	0	0	2	23
4A27P	KWADACHA RIVER	Peace	1695	2014-06-15	N/A	0	E	0%	0	0	0	224	33	16
4A30P	AIKEN LAKE	Peace	1061	2014-06-15	N/A	4		80%	8	0	0	8	5	28
4B03A	HUDSON BAY MTN	Skeena	1452	2014-06-13	0	0		0%	0	412	N/A	N/A	96	
4B12P	GRANDUC MINE	Skeena	790	2014-06-15		104		17%	339	1313	339	1389	626	10
4B15P	LU LAKE	Skeena	1308	2014-06-15	5	0			0	0	0	7	0	15
4B16P	SHEDIN CREEK	Skeena	1320	2014-06-15	10	7		2%	41	905	0	916	340	17
4B17P	TSAI CREEK	Skeena	1369	2014-06-15	25	158		26%	121	1697	0	1772	612	15
4B18P	CEDAR - KITEEN	Skeena	912	2014-06-15	0	0		0%	7	126	0	154	7	12

Code	Description		
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