

## Snow Survey and Water Supply Bulletin – February 1<sup>st</sup>, 2015

The February 1<sup>st</sup> snow survey is now complete. Data from 109 snow courses and 50 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

Temperatures across British Columbia continued to be well above normal through the month of January. Temperatures were generally 2-4°C above normal, with the largest temperature anomalies occurring in the Central Interior and northern British Columbia. January sea surface temperature anomalies in the Pacific Ocean off the shores of British Columbia have continued to be several degrees above normal.

January precipitation trends have been varied across the province. Vancouver Island, South Coast, and Kootenays experienced below normal precipitation. Above normal precipitation occurred in the Okanagan, Interior, Central Coast and Northwest BC. With increased temperatures, particularly on Vancouver Island and south-west BC, rainfall was the dominant form of precipitation through mid-elevation terrain.

### Snowpack

Snow pack accumulation trends from early in the season have persisted throughout January. With the exception of the Upper Fraser West and the Central Coast, all regions of the province have below normal February 1<sup>st</sup> snow basin indices (Figure 1). Snow basin indices range from a low of 12 % on the Skagit to a high of 148% of in Upper Fraser - West (Table 1 and Figure 1).

**Table 1 - BC Snow Basin Indices – February 1, 2015**

Basin	% of Normal	Basin	% of Normal
Upper Fraser West	148	Boundary	87
Upper Fraser East	98	Similkameen	96
Nechako	109	South Coast	29
Middle Fraser	86	Vancouver Island	33
Lower Fraser	36	Central Coast	115
North Thompson	87	Skagit	12
South Thompson	90	Peace	91
Upper Columbia	97	Skeena-Nass	96
West Kootenay	84	Stikine	85
East Kootenay	80	Liard	77
Okanagan	92	Northwest	NO DATA

Near-normal (90-100%) to slightly below normal (80-90%) snow packs are present through most of the province. Extremely low snow packs (<40%) are present throughout south-west BC, including the Lower Fraser, South Coast, Vancouver Island and Skagit basins. This is

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the result of both warmer temperatures and drier conditions through the winter in these regions.

Variability in snow packs are present within snow basins. Above normal (>120%) snow measurements were observed in areas surrounding the Cariboo Mountains, Bowron and headwaters of the Quesnel River, West Central BC including areas around Burns Lake, Francois Lake and around Houston, and through the Chilcotin.

### Outlook

Warm Pacific Ocean temperatures and weak El Niño-like conditions are expected to persist into the spring. These will likely drive continued warmer than average temperatures, particularly along coastal sections of the province. Environment Canada is forecasting a high likelihood of above normal temperatures over the February to April period across British Columbia.

By early February, two-thirds of the annual BC snowpack has typically accumulated. With the current seasonal weather outlook and snow pack conditions in south-west British Columbia, it is unlikely that snow packs will recovery significantly unless the region experiences much higher than normal precipitation over the next few months. Depending on spring weather, low flows can be expected to occur earlier than normal on Vancouver Island, South Coast, Skagit and Lower Fraser basins, and there is an increased risk of low flows through the summer.

At a basin-wide scale, higher than normal snow packs in the Upper Fraser West basin indicate a trend towards increased seasonal flood risk in the unregulated regions of the Nechako basin this year. Similar smaller pockets of higher snow packs and potential increased flood risk exist in west central BC (Houston, Burns Lake, Vanderhoof), West Chilcotin, and Cariboo Mountains (Bowron River, Quesnel River and area). However, with two or more months still left of the snow accumulation season, conditions may change in these or other areas of the province.

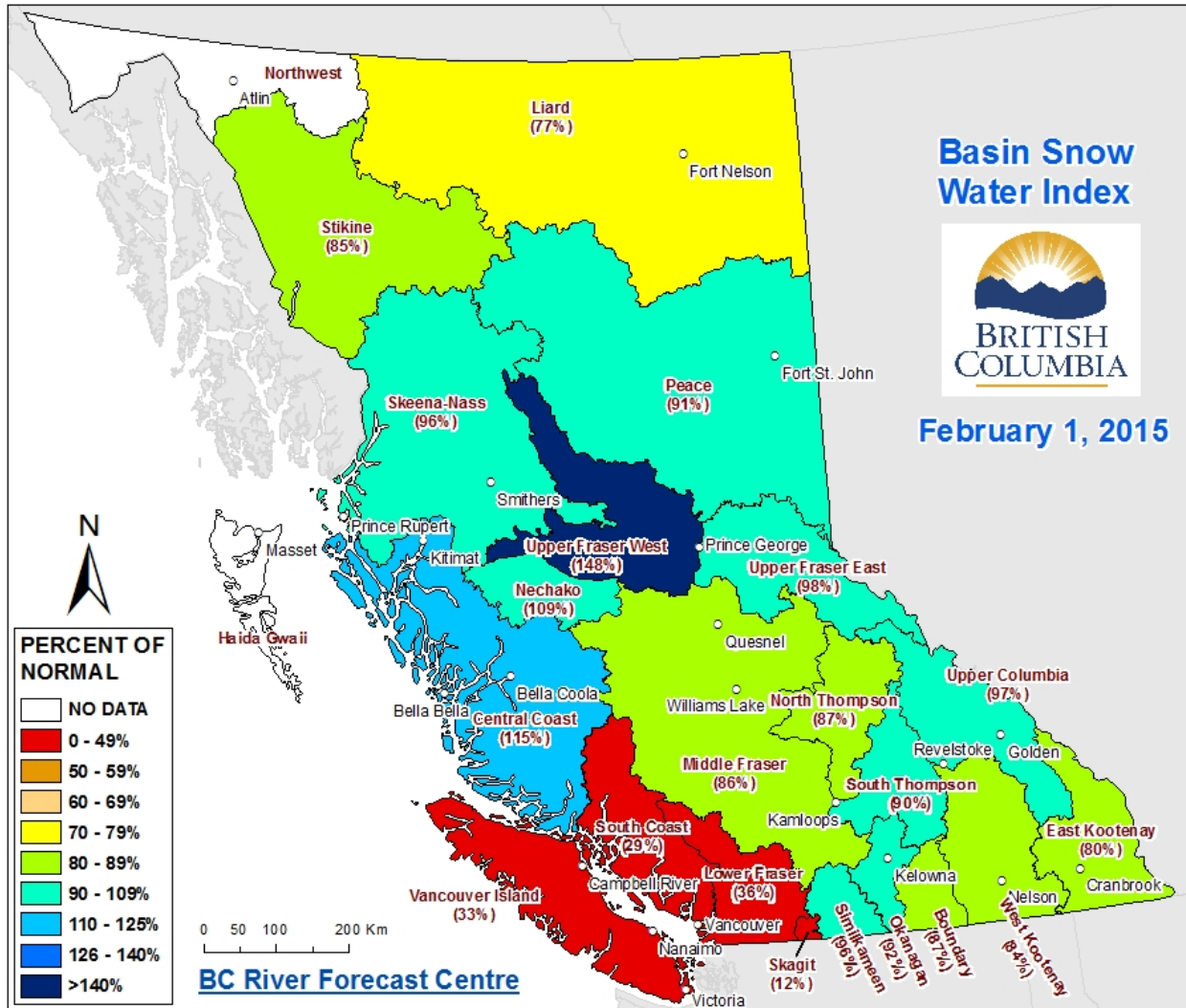
The River Forecast Centre will continue to monitor snow pack conditions and will provide an updated seasonal flood risk forecast in the March 1<sup>st</sup> 2015 bulletin, which is scheduled for release on March 9<sup>th</sup>.

BC River Forecast Centre  
February 6, 2015



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Figure 1: Basin Snow Water Index – February 1<sup>st</sup>, 2015



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