



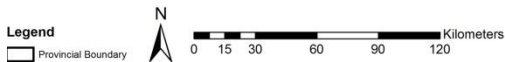
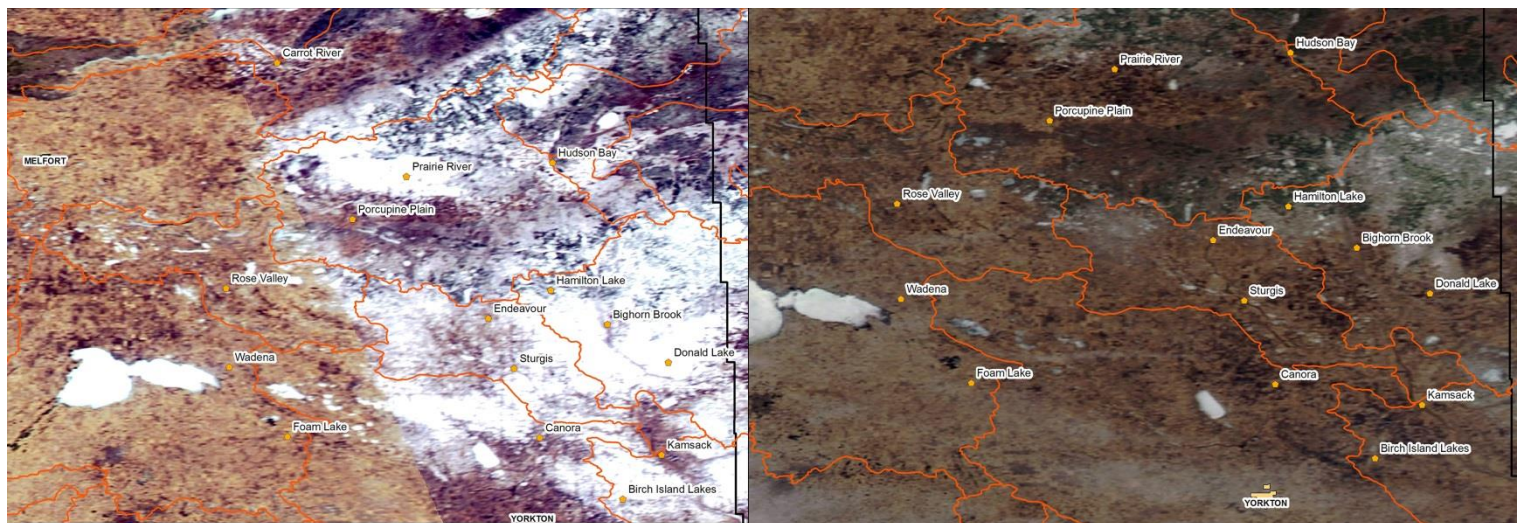
Spring Runoff Update – April 22, 2016

Well above seasonal temperatures early this week resulted in a rapid melt of the snowpack that was remaining in the Assiniboine, Swan, and Red Deer River basins. This area was wetter than normal in the fall of 2015 and had above normal snowfall in March and early April.

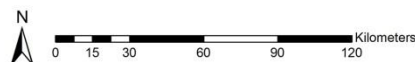
Based on Wednesday’s satellite imagery, it looks like there is a little bit of snow left in the Porcupine Forest area, which is the upper part of the Swan River basin north of Norquay, and some snow remains in the Pasquia Hills area, which is east of Carrot River in the Lower Carrot River Basin. Other than those two areas, the snow cover has receded as far north as Descherm Lake and Southend. This is quite early for a melt in southern portions of the boreal forest.

Aside from the main stem of the Assiniboine and Red Deer Rivers, which are at or near peaks, all tributaries are now in recession.

Snow Cover Satellite Images April 18-20, 2016



Background Image:
April 18, 2016, NASA Rapid Response M/C
AERONET Bratts Lake & Waskesiu Subsets



Background Image:
April 20, 2016, NASA Rapid Response MODIS In
AERONET Bratts Lake & Waskesiu Subsets

Swan and Red Deer River Basins

Observed peak flows were generally near 1:5 year events across the Swan and Red Deer River Basins. Consequently, out of bank flows and flooding related issues are expected to be minimal in these areas.

Assiniboine Basin

Peak flows in the Canora area were as high as 1:25 year (Spirit Creek near Buchanan) and 1:50 year (Crooked Hill Creek near Canora) events. There were reports of numerous roadways overtopping in the area.

Spirit Creek, which is the major tributary to Good Spirit Lake, peaked on Tuesday and has since been receding at a faster than anticipated rate. As a result, the inflow volume to Good Spirit Lake is expected to be less than forecasted earlier in the week and Good Spirit Lake is now not expected to exceed an elevation of 485.2 m in response to this event. Good Spirit Lake was at 484.76 m at 7 a.m., 0.44 m below the forecasted peak, and rising at a rate of about 0.09 m per day. There is however a good deal of uncertainty in this estimate as most of the inflows are not gauged. The peak is still expected to be in early May.

The Whitesand River near Canora peaked earlier this week at about a 1:10 year level.

The Assiniboine River at Sturgis appears to be at peak this morning. With a peak of 77 cubic metres per second (m³/s), it would be about a 1:9 year event.

The Assiniboine River at Kamsack is at 234 m³/s this morning and appears to be at or very near its peak. This would be about a 1:10 year event.

Fishing Lake is at 530.41 m this morning and appears to be near peak. Once outflows from Shellmouth Dam are staged down the Water Security Agency (WSA) will open the constructed outlet works.

Qu'Appelle River

Buffalo Pound Lake is being maintained near 509.47 m, which is the top of its summer operating range. WSA is continuing to move water from Lake Diefenbaker down the Qu'Appelle River to bring Pasqua and Echo Lakes up to near the top of their desirable summer operating range (478.84 to 479.15 m) in time for recreation season. These lakes are expected to see an increase of about 0.3 to 0.4 m over the next five weeks.

Last Mountain Lake is at 490.24 m and rising slowly as it nears the top of its desirable summer operating range (489.66 to 490.27 m). Mission and Katepwa Lakes have been holding steady at about 478.26 m, lower than typical summer operating levels but well within their desirable summer operating range of 478.08 to 478.38 m.

Crooked Lake is within the April operating range at 451.74 m and is dropping slowly to within the desirable summer operating range (451.41 to 451.71 m). Round Lake is at a record low level for this time of year and may remain at or near record low levels through 2016 if conditions remain dry. WSA is unable to operate the Round lake Control Structure as land control agreements are not in place with the federal government and First Nations in the area.

Quill Lakes

The Quill Lakes are at 520.7 m and appear to be at or near their peak as tributary inflows are nearing completion. This is about 0.05 m above the record peak observed in 2015.

Southwest

Snowmelt runoff was sufficient to fill or nearly fill most reservoirs in the southwest other than in the Maple Creek area where reservoirs are generally at 65-80 per cent of capacity. Initial irrigation deliveries are expected to commence next week and continue into early May.

Saskatchewan River System

Flows in the South Saskatchewan River are well below normal, near lower decile, for this time of year. Lake Diefenbaker is currently being held near 552.5 m and will be brought up to 553.0 m for June 1. Flows on the North Saskatchewan River are also below normal, but not as low as on the South Saskatchewan. WSA's 10-day forecast for the Saskatchewan River System can be found here: <https://www.wsask.ca/Lakes-and-Rivers/Provincial-Forecast/>

Weather Forecast

No significant precipitation accumulations are expected within the province over the next five days. Highest accumulations over this period are expected to be in the southwest where 5-10 mm is expected early next week. Areas along the United States border are also expected to see some precipitation over this period, although nothing significant.

Next Update

The Water Security Agency will post the next update on April 26, 2016 or before if conditions warrant it.

