

# Ministry of Forests, Lands, Natural Resource Operations and Rural Development

## Flood Warning – Upper Fraser River (UPDATE)

Issued: 12:30PM June 30, 2021

The River Forecast Centre is **maintaining** the **Flood Warning** for the **Upper Fraser River** including:

- **Upper Fraser River including the Robson Valley and areas from Sinclair Mills upstream to Torpy, Dome Creek, Dore River, McBride and surrounding tributaries**

Yesterday, temperatures continued to trend upward in the headwaters of the Upper Fraser. The average maximum temperature at four of the high elevation automated snow weather stations had been increasing as follows; June 24: 14.2°C, June 25: 20.3°C, June 26: 26.3°C, June 27: 29.4°C, June 28: 31.5°C. The maximum temperature increased further on Tuesday June 29<sup>th</sup> reaching an average of 32.8°C. The average elevation at these stations is 1,725 metres above sea level. Additionally, the minimum temperatures have remained above 20°C overnight. The extremely hot temperatures have triggered an extraordinary amount of snowmelt at the higher elevations of the Upper Fraser River. The stations that still had remaining snowpack were melting at 80-100mm of snow water equivalent per day. Dome Mountain (1A19P) is the last station with snow and currently measures 121 mm snow water equivalent. It is expected to run out of snow by Thursday or Friday. The extreme heat is rapidly melting the unmonitored high elevation snowpack, perennial snow and glaciers.

Environment and Climate Change Canada (ECCC) forecasts one more extremely hot day before slightly cooling on Thursday and Friday in the region. The current forecast at McBride has the following maximum temperatures; Wednesday: 38°C, Thursday: 31°C, Friday: 31°C, Saturday: 29°C. The CLEVER model forecasts that flows in the Upper Fraser will increase from snowmelt for one more day, at least.

As of 10:38 AM PDT Wednesday 30 June 2021, ECCC issued a Severe Thunderstorm Watch for the region for this afternoon and evening. There is a possibility of localized heavy rainfall. Heavy rain falling on a rapidly melting snowpack could quickly amplify the already very high flows, especially in smaller watersheds.

The status of rivers in the region at 12:00PDT on June 30<sup>th</sup>:

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- FRASER RIVER AT RED PASS (08KA007) is flowing at 343 m<sup>3</sup>/s (nearing 20-year flow) and is forecast to continue gradually rising for at least another day.
- FRASER RIVER AT MCBRIDE (08KA005) is flowing at 1330 m<sup>3</sup>/s (between 50-year and 100-year flow) and forecast to continue rising for at least another day. The historical recorded peak flow for the river is 1424.5 m<sup>3</sup>/s set in June 1972. The 1972 high flow was a basin-wide heavy rainfall event occurring during a period of high snowmelt. Pre-ceding maximum temperatures in McBride reached 28°C for three consecutive days and was followed by 50.8 mm of precipitation on June 11-12, 1972.
- DORE RIVER NEAR MCBRIDE (08KA001) reached 150 m<sup>3</sup>/s (20-year flow) on Tuesday evening and may reach higher evening peaks over the upcoming days. Last year's flood event occurred with a peak flow of 171 m<sup>3</sup>/s on June 23, 2020 and was rainfall driven.
- MCKALE RIVER NEAR 940M CONTOUR (08KA009) reached approximately 89 m<sup>3</sup>/s (5-year flow) on Tuesday evening. The past four days have seen similar daily peaks suggesting that snow is a limiting factor and it's unlikely for flows to go higher than 90 m<sup>3</sup>/s on snowmelt alone.
- MORKILL RIVER BELOW HELLROARING CREEK (08KA013) reached approximately 290 m<sup>3</sup>/s (slightly below 2-year flow) on Tuesday evening. The past five days have seen similar daily peaks suggesting that snow is a limiting factor and it's unlikely for flows to go higher on snowmelt alone.

Moving forward, the rivers are expected to remain seasonably high and will remain vulnerable to basin-wide moderate to heavy rainfall events for at least another 10-days. Similar rainfall events occurred last year in late June and early July.

Details of the CLEVER Model forecasts for this region can be found at:

[http://bcrfc.env.gov.bc.ca/freshet/map\\_clever.html](http://bcrfc.env.gov.bc.ca/freshet/map_clever.html)

The public is advised to stay clear of the fast-flowing rivers and potentially unstable riverbanks during the high-streamflow period.

The [River Forecast Centre](#) continues to monitor the conditions and will provide updates as conditions warrant.

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A **High Streamflow Advisory** means that river levels are rising or expected to rise rapidly, but that no major flooding is expected. Minor flooding in low-lying areas is possible.

A **Flood Watch** means that river levels are rising and will approach or may exceed bankfull. Flooding of areas adjacent to affected rivers may occur.

A **Flood Warning** means that river levels have exceeded bankfull or will exceed bankfull imminently, and that flooding of areas adjacent to the rivers affected will result.