

Provincial Freshet and Flood Status

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Note - With province-wide flood conditions stabilizing, this will be the last bulletin for the season.



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Provincial Summary

Across the province, approximately 90% of the snowpack has melted. Flows have peaked along most major river systems, but there is ongoing vulnerability to rain-driven events, particularly in the Nechako, Chilcotin, Quesnel, Central Coast, South Thompson, and Columbia systems. Small systems and urban areas remain vulnerable to flooding if significant local rainfall or thundershowers occur. Along the lower Fraser River, flows have begun to recede but remain high for the time of year. Temperatures across the province are warm, but not extreme. With most snowpack melted, the heat is unlikely to significantly increase flood hazard.

Weather (Current and Forecast)

Current weather forecasts show warm and dry conditions for most of the province with above seasonal temperatures. An ongoing precipitation event is occurring on the North and Central Coast bringing significant rainfall. This rain event is expected to continue over the weekend with some spill over occurring in the Nechako basin and Northern Cariboo. On the 17-18th there is the chance for some showers in the Southern Interior and Kootenays with the possibility of localized thunderstorms. Temperatures for next week are expected to be above seasonal across most of the province with dry conditions.

Flood Warnings and Advisories

There is a Flood Watch in effect for **the Chilcotin, Quesnel, and Nechako River**; High Streamflow Advisories are in place for the **South Thompson, Upper Fraser, Lower Fraser, Upper Columbia, and Central Coast** in response to snowmelt and recent rainfall.

For up-to-date advisories, please consult the [Current Flood Warnings and Advisories](#) map, as these may change at any time.



River Conditions and Outlook

Many smaller rivers and systems across BC have begun to recede and are now flowing at near normal or above normal flows for the time of year. Overall high flows in many areas reflect the delayed snow melt and ongoing wet weather. Larger rivers, including the Thompson River (and tributaries) and Fraser River (from Prince George downstream to the Lower Mainland) are flowing at well above seasonal levels and while they have begun to recede, they still remain vulnerable to large precipitation events. The Chilcotin, Nechako, and Central Coast are showing significant flows and remain vulnerable to rainfall. Next week there is the possibility of thundershowers in the Southern Interior which can bring heavy localized rainfall and can create flash flood conditions in urban areas and on small systems, underscoring the need to maintain situational awareness.

Weather continues to play a key role for flood risk; flows are expected to remain high over the coming week, with the potential for emerging flood issues related to rainfall runoff. Prolonged high flows are expected to extend well into July this year.

The [River Forecast Centre](#) public website is updated daily and should be consulted by those seeking up-to-date information.

*All model outputs are subject to uncertainty, change, and revision.

Snow Conditions

June 15th Snow Basin Indices for BC showed increased snowpack due to colder than normal weather and a delay in the onset of melting for high elevation locations. For June 15th, the overall provincial Snow Basin Index was at 198% of normal, with the same value for the Fraser River Basin.

This year's snow melt was delayed by 2-4 weeks. Approximately 90% of this year's snowpack has now melted, with only a few high-elevation snow-monitoring locations with continued melt in the province.

Additional information can be accessed at the [Snow Conditions](#) webpage.

Active Floods of Note

Most Evacuation Alerts and orders have been rescinded across the province, with the exception of the Schouten Road area of the Little Shuswap Lake Band. Additional information is available through [Emergency Info BC](#).

Resources

Emergency Management BC (EMBC) continues to support communities and First Nations throughout the province with seasonal readiness, preparedness, and response. This includes the coordination of flood-related resources and asset deployments where they are needed most. The public is encouraged to understand their seasonal flood hazards, and EMBC provides information on [how to be prepared](#).

Ministry of Forests staff throughout the province continue to support emergency management efforts through their roles and responsibilities as outlined in the Provincial Flood Emergency Plan. See [DriveBC](#) for current information on road and highway conditions and closures.

Definitions:

Flood Warnings and Advisories	
High Streamflow Advisory	River levels are rising or expected to rise rapidly, but no major flooding is expected. Minor flooding in low-lying areas is possible.
Flood Watch	River levels are rising and will approach or may exceed bankfull. Flooding of areas adjacent to affected rivers may occur.
Flood Warning	River levels have exceeded bankfull or will exceed bankfull imminently. Flooding of areas adjacent to the rivers affected will result.
Hydrometrics and Forecasting	
Hydrometric Conditions	Current water flow and/or level conditions, based on the federal Water Survey of Canada (WSC) hydrometric gauge station sites indicating flood conditions in BC, based on a total of 247 WSC stations, binned by flood frequency analysis.
Forecast Return Period	Forecast (estimated) future water flow and/or level conditions, based on the BC River Forecast Centre's hydrologic models. The primary spring freshet flood forecasting model is the Channel Links Evolution Efficient Routing (CLEVER) model. For spring 2021, the CLEVER model includes outputs for 311 sites. The return period values represent the inverse measure of the probability of a particular flow occurring in any given year. For example, a 50-year flow has a probability of 1/50 or a 2% chance of occurring in any given year, a 100-year flow has a 1/100=1% chance of occurring in any given year, a 20-year flow has a 1/20 or 5% chance of occurring in any given year, a 5-year flow has a 1/5=20% chance each year, etc.
Flood Frequency Analysis	Statistical analysis of historic peak flows used to understand the frequency or probability of extreme flows.
Snow Basin Index	Estimated average snow water equivalent (e.g. amount of water contained in the snowpack) across a watershed basin relative to its historic average.