

Provincial Freshet and Flood Status

Date: June 1, 2023 5pm – FINAL DASHBOARD FOR FRESHET 2023



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Provincial Summary

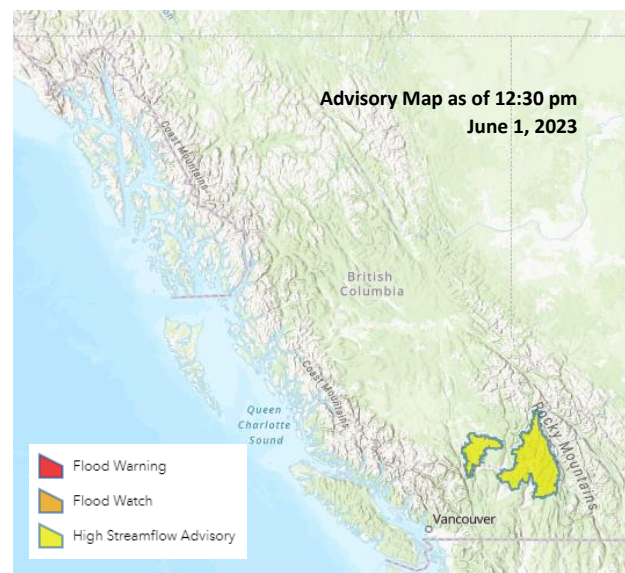
Weather throughout the province has remained warm and dry over the past week. Most river flows in the province have peaked and receded, although lake-fed rivers remain at high flows due to their delayed flood response. The risk of snowmelt-related flooding has diminished, and flood hazards are now driven by rain events. While some rivers remain at high flows, many are unseasonably low for this time of year and may indicate drought potential and water availability concerns.

As the snowmelt component of flood hazard has mainly passed and stream flows are receding, this will be the final dashboard for freshet 2023.

Weather (Current and Forecast)

Weather conditions over the past week remained warm and dry throughout the province. The North Coast and Northern Interior is expected to see some rainfall through the weekend and into early next week. Convection is forecast in northeastern B.C. near Fort St. John and the northern Rockies over the weekend, potentially bringing light precipitation, wind, and lightning. The warm and dry conditions will continue for the rest of the province, with unseasonably warm temperatures expected into next week.

Flood Warnings and Advisories



Flood Warning: none

Flood Watch: none

High Streamflow Advisories: South Thompson River, Bonaparte River

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

River Conditions and Outlook

Most rivers in the province reached their seasonal maximum flows over the past two weeks and flows have receded to unseasonably low levels. Lake-fed rivers remain at high flow due to their delayed flood response and are expected to remain high for several more days. For rivers with significant remaining snowpack, flows may rise slightly over the weekend with the forecast warm temperatures, but increases are not expected to be substantial.

River levels on the Bonaparte River (currently 2-year return period flow) remain high due to rainfall runoff last week. On the South Thompson River, flows have reached peak levels, but have yet to experience a declining trend. Levels are expected to remain high over the coming days before receding, but no significant additional river rises are expected. Minor flood hazards remain for the Bonaparte and South Thompson rivers.

The light to moderate rainfall forecast for the North Coast and Northern Interior may cause an increase in flows. In particular, the Dease Lake to Cassiar areas may see flows rise on Monday or Tuesday, potentially reaching a 5-10 year return period depending on rainfall.

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.

Active Floods of Note

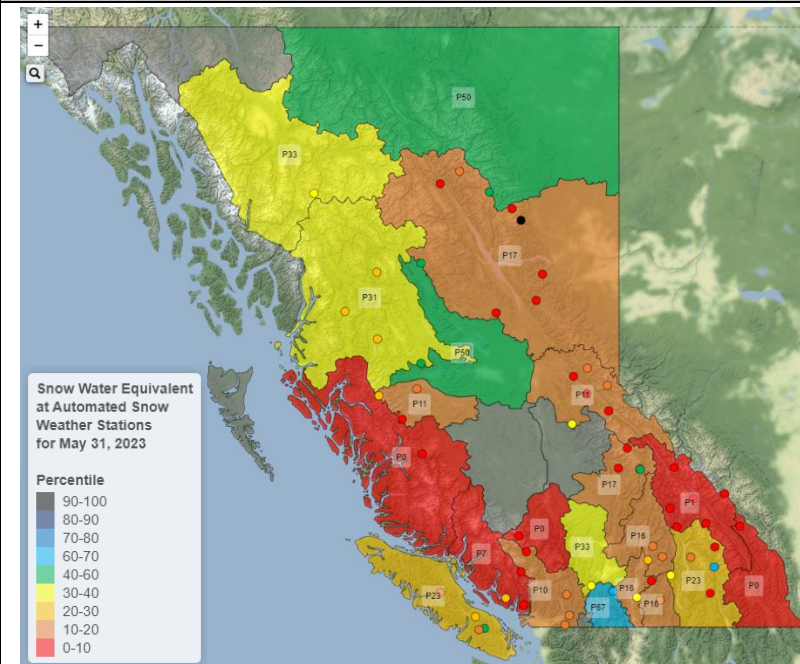
Evacuation Orders and Alerts are in place for localized areas in the Village of Cache Creek and Regional District of Kootenay-Boundary. Additional information is available through [EmergencyInfoBC](#).

Resources

The Ministry of Emergency Management and Climate Readiness (EMCR) continues to support First Nations and communities 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 EMCR 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.

Snow Conditions



Snowpack throughout the province rapidly declined over the past few weeks and many stations have been snow-free since last week. The upcoming expected unseasonably warm temperatures will likely exhaust almost all remaining snowpack in the province. As of June 1, 18% of snowpack in the province is remaining compared to the normal value of 62% remaining.

The rapid and early snowmelt that occurred this year may be a factor toward more severe and prolonged drought conditions throughout the summer, which will be dependent on rainfall. Current areas of concern for drought are the Northeast, North Peace, Vancouver Island, South Coast, Southern Interior, Kootenay, and Columbia.

The *June 1st Snow and Water Supply Bulletin* is scheduled to be released on June 8. More information is available on the [Snow Conditions](#) webpage.

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 2023, the CLEVER model includes outputs for 348 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.