

Ministry of Water, Land and Resource Stewardship

UPDATE: Flood Warning – Chilcotin River upstream of Farwell Canyon

Flood Watch – Chilcotin River, Fraser River from Chilcotin River to Hope

High Streamflow Advisory – Fraser River downstream of Hope

Issued: 5:00 PM August 2, 2024

The River Forecast Centre is maintaining a **Flood Warning** for:

- Chilcotin River upstream of landslide in the vicinity of Farwell Canyon

The River Forecast Centre is maintaining a **Flood Watch** for:

- Chilcotin River downstream of the landslide in the vicinity of Farwell Canyon
- Fraser River from the Chilcotin River confluence downstream to Hope

The River Forecast Centre is maintaining a **High Streamflow Advisory** for:

- Fraser River downstream of Hope

Synopsis:

Overnight July 30-31, a landslide occurred on the Chilcotin River near Farwell Canyon, 18 km southeast of Hanceville, pushing debris across the river channel and blocking the flow of the Chilcotin River. This landslide has dammed the river and is creating a lake currently extending over 11 kilometers upstream.

The eventual overtopping of the landslide material may lead to sudden erosion of the debris and sudden failure of the landslide dam. This could potentially cause an outburst flood downstream of the landslide. In this scenario, a surge of water would rapidly move down the Chilcotin River and into the Fraser River. Water levels could increase extremely quickly along the Chilcotin River as well as in the Fraser River immediately below the confluence. Staff are maintaining constant surveillance of the landslide area, real-time imagery has been established at the site, and the Water Survey of Canada has installed water level gauges in the area upstream of the landslide to support with monitoring.

Preliminary modelling of a potential worst-case scenario of a rapid dam collapse has been completed. This examines potential peak flow rates and water levels along the Chilcotin River and Fraser River at locations at and downstream of the landslide through to Hope.

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While the River Forecast Centre continues to monitor conditions closely and will provide updates if conditions warrant, the preliminary modelling shows that the **potential worst-case scenario**, estimated flows are expected to be below typical freshet peak levels, along the mainstem of the Fraser River south to Hope – though well above typical freshet flows along the Chilcotin River from the Farrell Canyon Bridge to the Fraser Confluence.

A summary of downstream conditions from this potential scenario includes:

Chilcotin River at Farrell Canyon Bridge: estimated travel time following sudden dam failure: 1.5 hours. Estimated peak flow: 6,590 m³/s. Estimated typical freshet peak flow: 300 m³/s. Peak height (above current): 10 m

Chilcotin River at Fraser Confluence: estimated travel time following sudden dam failure: 3 hours. Estimated peak flow: 5,545 m³/s. Estimated typical freshet peak flow: 340 m³/s. Peak height (above current): 4 m

Fraser River at Lillooet: estimated travel time following sudden dam failure: 15 hours. Estimated peak flow: 3,157 m³/s. Estimated current flow: 2,650 m³/s. Estimated typical freshet peak flow: 5,400 m³/s. Peak height (above current): 1.8 m

Fraser River at Lytton: estimated travel time following sudden dam failure: 21 hours. Estimated peak flow: 3,770 m³/s. Estimated current flow: 2,650 m³/s. Estimated typical freshet peak flow: 5,440 m³/s. Peak height (above current): 1.5 m

Fraser River at Boston Bar: estimated travel time following sudden dam failure: 24 hours. Estimated peak flow: 3,707 m³/s. Estimated typical freshet peak flow: 8,600 m³/s. Peak height (above current): 1.0 m

Fraser River at Hope: estimated travel time following sudden dam failure: 29 hours. Estimated peak flow: 3,660 m³/s. Current flow: 2,700 m³/s. Typical freshet peak flow: 8,680 m³/s. Peak height (above current): 0.3 m

In addition to increased river flows and water levels, significant quantities of debris and sediment will also be mobilized as flow is able to pass the landslide.

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There remains uncertainty over the timing and mechanism for re-establishing river flow pathways across the landslide and into the Chilcotin River downstream, however it may occur at any time without notice.

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

For information on how to prepare for flood hazards, visit [PreparedBC](#).

BC River Forecast Centre

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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. Fast-flowing bodies of water increase risk to life safety. 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.