

Flood Forecasting and Warning

How does the province determine which rivers may flood and when? What tools does it have to communicate the potential impacts to the public?

The River Forecast Centre (RFC) monitors and assesses the risks that rainfall and snowmelt pose to Albertans, property, and infrastructure. By monitoring the weather, river conditions, and mountain snowpack, the RFC forecasts when floods may occur, how high river levels may rise, and then communicates this information to the public and local emergency managers.

What kinds of advisories does the RFC issue?

The RFC uses four types of advisories for Spring and Summer seasons:

- High Streamflow Advisory
- Flood Watch
- Flood Warning
- Spring Runoff Advisory



What is a High Streamflow Advisory?

A High Streamflow Advisory means that the water level in a stream is rising or expected to rise rapidly, but no major flooding is expected.

High Streamflow Advisories are typically issued for all of the streams and their tributaries within the areas forecasted to receive the greatest rainfall amounts.

Things to be cautious of if a High Streamflow Advisory is issued:

- Streams will be moving faster than normal.
- Streams will be higher than normal and areas within the stream channel that are normally dry, such as sand bars, may become covered in water.
- Minor flooding is still possible in flood-prone areas such as low-lying areas next to the stream (more likely in small creeks and streams).
- For smaller streams or creeks, blocked culverts may cause minor roads to be overtopped.

A High Streamflow Advisory can be upgraded to a Flood Watch or Flood Warning should the rainfall event worsen.

What is a Flood Watch?

A Flood Watch means that the water level in a stream is rising and flooding of areas adjacent to the stream is likely, no major infrastructure impacts are expected.

Flood Watches are typically issued for specific reaches of a stream or river when significant water level rises beyond the normal range are forecasted.

Things to be aware of if a Watch is issued:

- The public should be cautious of rapidly rising river levels.
- Observers may not be able to tell where the normal river bank is located as water could now be flowing outside the normal river channel.
- The water will no longer be clear meaning objects below the surface including the channel bottom can no longer be seen.

- There will often be debris floating downstream. This can lead to debris blockages and localized flooding.

Watches can be upgraded to Flood Warnings should the weather worsen in the advisory area.

What is a Flood Warning?

A Flood Warning means that flooding of areas adjacent to the stream is occurring or is imminent, and the flooding of property or infrastructure is likely.

Flood Warnings are issued for specific locations along a river where forecasted water levels are expected to exceed known flood thresholds. These water levels have been identified by the impacts observed during previous floods, general river information at stream gauge locations, or by using Provincial Flood Hazard Maps.

Things to be aware of if a Flood Warning is issued:

- Anyone close to the river should take appropriate measures as directed by their local community or municipal emergency manager.
- Floods of this size can pose a serious risk to life and property.

What is a Spring Runoff Advisory?

A Spring Runoff Advisory lets people know that stream levels are rising or are expected to rise across a large portion of the province due to the snowmelt caused by an increase in air temperature in the spring.

Spring Runoff Advisories are issued for large areas of the province and are not specific to any one stream or river. They are triggered in the spring when air temperatures rise high enough to cause the plains snowpack to melt, which is typically in late March to April. Plains snowpack is snow that has collected in the agricultural areas of the province, typically east of the mountains and the foothills.

Things to be aware of if a Spring Runoff Advisory is issued:

- People in the advisory area may be affected by minor flooding near streams or overtopped roads.
- Ponding of melt water in low-lying areas where water does not have a direct path to a stream may occur.
- Ice jams or ice runs are possible if there still is ice in the streams at this time.

Spring Runoff Advisories may be upgraded to Flood Watches or Flood Warnings if a specific stream is at risk of more than minor flooding of low-lying areas.

For further information and to learn how the River Forecast Centre communicates, please visit rivers.alberta.ca

Download the Alberta Rivers app for current information about snow, river flows, lake levels, precipitation, and ice conditions across the province, plus important advisories sent straight to your cell phone.

