

Southeast Alberta Flood Potential in 2011

FACTS AT YOUR FINGERTIPS

Flood Potential

The potential for spring flooding in the Cypress Hills and Medicine Hat region is dependent on four factors: soil moisture, the snowpack, temperature and rainfall.

Soil moisture as of February 2011

Currently, the soil moisture in the Medicine Hat and Cypress Hills area is higher than normal. This has resulted in creeks flowing at higher levels than usual.

Come spring, it is anticipated that flows will also be higher than normal.

Alberta Environment will continue to work with Alberta Agriculture and Rural Development to ensure we have an accurate picture of soil moisture conditions throughout the province.

Snow pack as of February 2011

At the end of January, Alberta Environment collected first snowpack data in the upper portions of the Cypress Hills.

Compared to the 20 years of historical record, the January 2011 survey results are above normal.

In any year with a measurable snowpack there is a risk of localized flooding in low-lying areas caused by either above normal air temperatures that result in a quick melt or above normal rainfall.

A second survey will be completed in the area at the end of February.

It is important to note that soil moisture and snow pack conditions could change before late spring.

Temperature

A sudden increase in temperature can lead to a quicker than expected snow melt. There are no forecast tools available which can predict the timing of these sudden temperature increases more than a few days in advance.

The amount of heat required to cause flooding concerns on creeks and rivers depends on how wet the soil is before it rains or before the snow melts. Dry soil will soak up snowmelt and rainfall while wet soil will allow more water to run into the rivers.

Spring rainfall

There are no forecast tools available which can predict the timing and volume of spring rainfall in the region. Spring rainfall can only be predicted a few days in advance.

The major flooding of Ross Creek in 2010 was due in large part to heavy rainfall.

The Cypress Hills saw 150 millimetres of precipitation fall on wet soil in a very short time, which allowed more water to run into creeks.

River Flow Forecasting

Alberta Environment will continue to monitor conditions and assess the flooding potential as the snowmelt season approaches.

Land owners who have previously had problems with snowmelt should be vigilant this spring.

Should hazardous conditions for large areas be identified, advisories or warnings will be issued.

For more information on Alberta's River Flow Forecasting Program, email AEP-Watersciences.Forecaster@gov.ab.ca or visit www.environment.alberta.ca/01547.html.

February 2011

It is too early in the year to accurately predict potential flooding.

The potential for spring flooding in the Cypress Hills is dependant on soil moisture, snowpack, temperature and rainfall.

Your municipality is the best source of information during a flood.