

Calgary – Bow and Elbow Rivers – Flood Hazard Study – Summary

Community	City of Calgary Rocky View County Municipal District of Foothills No. 31
Stream	Bow River Elbow River
Basin	Bow River – 5B

This study delineates flood hazard areas and determines design flood levels along the Bow and Elbow Rivers through Calgary. The study area includes an approximate 44 km reach of the Bow River and an approximate 11 km reach of the Elbow River. The design discharge for the Bow River ranges from 1970 m³/s at the upstream study extent to 3110 m³/s at the downstream extent. The design discharge for the Elbow River downstream of the Glenmore Dam is 758 m³/s.

The headwaters of the Bow River are in the Rocky Mountains upstream of Lake Louise. Although there are a number of storage reservoirs in the basin upstream of Calgary, their primary purpose is to provide hydroelectric power and thus they offer little opportunity to moderate flood flows. The Elbow River has its source in the foothills upstream of Bragg Creek. The design flow for Elbow River downstream of the Glenmore Dam reflects routed flow attenuation. Flooding within the study area typically occurs during the open water season, primarily as a result of major mid-summer storm events, but high water levels can also occur along the Bow River during the ice-affected season due to freeze-up ice jam events. High flows are most likely to occur between late-May and June. Open water flooding is the design case in the study area.

A digital representation of the flood hazard maps prepared as part of this study can be viewed online.

- [Calgary Flood Hazard Mapping](#)

For more information regarding specific flood hazards in your community, please contact Alberta Environment and Parks by email at ESRD.Flood@gov.ab.ca.

Flood Hazard Study Details

Study Status	Final
Report Name	City of Calgary Floodplain Study
Report Author	Alberta Environment, Water Resources Management Service, Technical Services Division, Edmonton, Alberta
Report Date	April 1983
Revision Date	June 2012

The original study was prepared in April 1983. Updated flood hazard mapping was published in February 1996 following additional hydraulic modeling work. Although the original report was not updated to reflect any revisions or new analyses, it is considered to provide valuable background information. Digital mapping was updated in June 2012 but an addendum has not yet been prepared. The original report and updated digital mapping constitute the revised study.

Flood information available after study completion may not be reflected in the current flood hazard study report or flood hazard mapping.

To obtain a PDF copy of the current report or mapping in PDF format, please contact Alberta Environment and Parks by email at ESRD.Flood@gov.ab.ca.

Instructions on how to obtain official GIS flood hazard mapping data, or more information on the Flood Hazard Identification Program and flood hazard studies in Alberta, are available online.

- floodhazard.alberta.ca

Provincial Designation Details

Designation Status	Designated
Designation Date	15 May 1996

Related Information

Adjacent Studies	<ul style="list-style-type: none">• Calgary – Nose and West Nose Creeks• Cochrane – Bow River, Bighill and Jumpingpound Creeks• Rocky View (County) – Elbow River and Lott Creek
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